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EASTERN CARPATHIAN STUDIES

ROUMANIA

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Being a summary of work undertaken by a group of the Le Play Society's members in 1933

With a Foreword by
THE RT. HON. BARON MESTON OF AGRA AND DUNOTTAR

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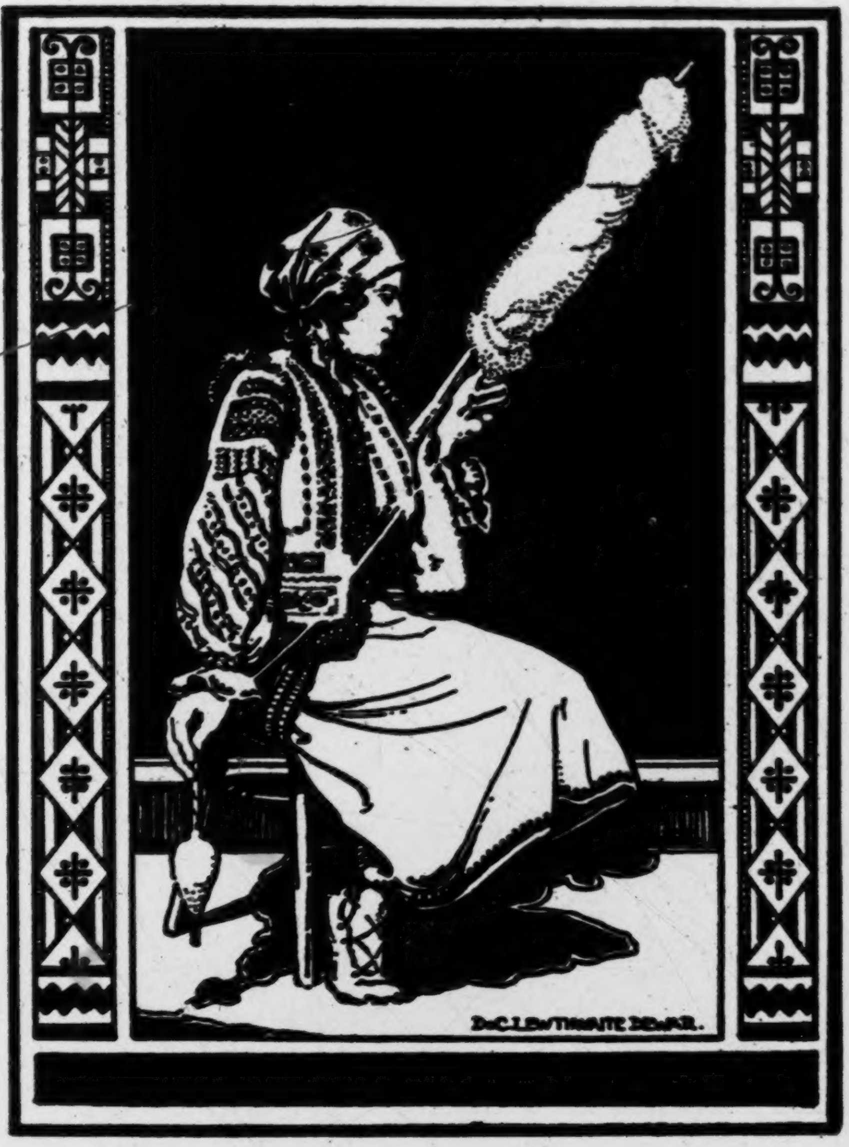
D.C. LEWTHWAITE DEWAR.

[Plate I-facing title page]

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THE LE PLAY SOCIETY,

58 Gordon Square, London, W.C.1

The Council of the Le Play Society wish to place on record their warmest appreciation of the courtesy extended to them by Monsieur C. M. Laptew, Roumanian Chargé d'Affaires in London, as representing the Roumanian Government. Also to His Excellency Monsieur N. Titulescu, the Roumanian Foreign Minister, and the Bureau de la Presse of the Roumanian Foreign Office for the help they gave in bringing about this visit. The Le Play Society is also indebted to the Lord Mayor of Bucarest, Monsieur Dem. Dobrescu, Professor Vladescu-Racoasa, Monsieur Jean Dragu and many other Roumanian friends. Their special thanks are due to Vice-Consul J. Popovici, who acted as guide and friend throughout the whole expedition, to M. Alexander Cosocariu and Dr. Pop of Cluj.

Special contributions have been included on Economic Geography by Dr. Hilda Ormsby and on Vegetation by Mr. H. J. Howard. The Editors wish to thank these contributors and the other members of the party for their help in compiling this record: Miss L. Adam, Miss E. M. Barke, Mr. E. Bruce, Miss G. E. Buist, Miss A. R. Burgess, Capt. C. D. Chase, Miss K. E. Coast, Mr. J. Craw, Mr. J. E. Daniel, Miss De C. L. Dewar, Miss K. C. Dewar, Miss L. Hegarty, Mr. H. M. Kinloch, Miss L. A. Lennox, Rev. H. Mattinson, Miss A. Moncrieff, Miss H. Mortimer, Miss G. I. MacGeagh, Miss A. D. Malden, Miss M. K. Marsland, Miss M. A. Oddie, Miss C. A. Peebles, Miss M. O. Reid, Miss M. E. Tatton, Dr. C. P. Snodgrass, Mrs. B. Swire, Miss M. B. Vines, Miss L. M. Warren, Miss G. A. Wood, Miss N. Wilkinson, Mr. E. Woodhead, Mr. W. Veevers.

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NOTE ON SPELLING AND PRONUNCIATION

104 The spelling throughout is taken, as far as possible, from Harta României Fizica—Administrativa şi Turistica, by M. D. Moldoveanu (1933). The Times Atlas version, where it differs from this, is shown in brackets. It should be noted that ţ=ts, and ş=sh.

FOREWORD

By LORD MESTON

President of the Le Play Society

421 114 LET US ASK OURSELVES—students, busy workers, travellers, ordinary newspaper-reading stay-at-homes, whoever we are —what do we know about Roumania? Extraordinarily little, would be the honest answer of most of us. We know that Roumania was our ally in the Great War, and picked up some territory thereby. We believe that her language is nearer to Latin than any other European vernacular. We remember that her map is dotted with romantically-named provinces—Bessarabia, Moldavia, Transylvania and others. But there we halt. Encyclopaedias would tell us more, but encyclopaedias are dull things. Here is a little book without a dull page, which nevertheless tells us a very great deal.

It is the work of members of the Le Play Society, who employed a holiday tour in seeing Roumania for themselves. Trained observers most of them, they brought back a collection of fresh, first-hand studies of the country and its life. They show us the land as it now is, built up from its geological past. They tell us of the peoples who have dwelt in it since pre-historic times; of the tribes which have poured backwards and forwards across it; of the folk who inhabit it now, of their usages, their faiths and their social life. We learn about the agriculture of the land, its industries, its mineral resources, and its economic limits. Its trees and flowers and cottage gardens are described; its climate, and the gala dress of its peasantry. There are no politics, but one gets a glimpse of how political change has reacted on rural life and prosperity.

Running through all the various studies, and linking them together, is a thread which each of the workers recognises as of the essence of the pattern. That thread is the special interest of the geographer in all that he sees, his capacity

121
114

for tracking the constant inter-relation between Man and Nature. Without claiming, as has been claimed, that Geography is the oldest of the sciences, he follows its guidance in the sure confidence that it will explain the life and activities of a country as no other single science can do. Hence his affection for "regional studies," such as this of Roumania. Hence his ready appreciation of much in a country's anthropology, sociology, economics, which would otherwise be isolated and undigested knowledge.

This is the *raison d'être* of the Le Play Society. It has now produced a series of these small handbooks, all based on original expert observation on the spot, clothing the dry bones of the old geographies with the flesh and blood of life and its story. As contributions to our knowledge of the world, and as companions to the more formal text-books, they ought to be of special value to teachers and students; and they may safely be used as models for other regional work, whether on a similar or on a less ambitious scale. Those who find the handbooks helpful may wish to make the closer acquaintance of the Society and its methods.

There is another aspect of the Society's work which appeals strongly to me personally. Having watched for years the *va et vient* at Geneva, where men and women of different nations are constantly mixing in work and in pleasure, I cannot overstate the value of kindly human intercourse as a solvent of international problems. Barriers have to be broken down before mankind get to know and understand their fellows: and there is nothing for levelling barriers like crossing frontiers. Friendly excursions such as those of the Le Play groups, intent only on studying and understanding the ways of other peoples and their problems, can do great good. To show interest in other people's lives is surely to generate mutual sympathy; and mutual sympathy is the only sure foundation for world peace. All success therefore to the Le Play Society and its members.

MESTON

I.—A PHYSICAL INTRODUCTION

105 **Roumania** owes its name to the rustic Latin speech of the
197 Roman provincials of Moesia and Dacia, impressed on the
101 region in a period before language had acquired its later
133 powers of tenacious resistance to fundamental change. It is true that subsequent contacts gave the local language a large number, perhaps even a majority, of Slavonic words, emphasising the country's links with eastern Europe, but the associations with the west were actively revived in the nineteenth century, when there was also a reaction against the connecting of Roumania with its southern and south-western neighbours as a Balkan State as had seemed natural to those impressed by the results of Turkish rule. These varying links of Roumania are understandable from a study of its physical features. The eastern projecting arc of the Carpathian Mountains and the Transylvanian Alps is, physically, as well as in a large measure culturally, an eastward outpost of western Europe standing out as a mighty rampart over against the south Russian steppe and its continuation into the loess-floored Polish platform. The curve from the Transylvanian Alps southward past the Iron Gates also connects them with the Balkan peninsula.

133 **Central Europe**, farther west, includes broken remnants of old (Permo-carboniferous) mountain systems passing through south Ireland, south Wales and south England as well as through Brittany, the Ardennes and the Vosges to the hills of middle Germany between Hannover and Frankfürt-a-M. Brittany lies mainly at low levels but most of the other elements of this old system have been lifted again into the round-shouldered hills, sometimes with extensive remains of old plains now at considerable heights, and usually with deep-cut stream lines that have often worked their way along fault lines. To the south of this old mountain-system stand the Alps, some of which incorporate the results of refolding of older mountain fragments.

The great arc of the Carpathians and Transylvanian Alps shows relationships with both these great schemes. Old, Permo-carboniferous mountain blocks were refolded in the upper Cretaceous and again in the early Tertiary period, in the latter of which the Transylvanian platform, between

133 the Apuseni and Bihor (Bihar)* mountains on the west and the Carpathians on the north-east and east, seems to have been let down. In this process it became outlined against its mountain frame largely by a series of faults and it was subsequently covered by new deposits. The great folding notable in the Alps further west, so active in the mid-Tertiary period, was apparently of short duration in north Roumania, but seems to have been continued on to Pleistocene times in the Transylvanian Alps on the south, with much faulting giving the impressive rise from the south and east to the line of heights. There was also in Tertiary times a great volcanic outburst that added a broad zone of highland on the west flank of the Carpathians from the two Bistriţa rivers southwards to the northern part of the Olt (Alt) valley. In the Pleistocene period earth movements seem to have increased the differencebet ween highlands and lowlands, and they were not uniform, for Pliocene deposits that lie 1,000 to 1,200 metres above sea at Borsec (Borszek) and Bilbor (Gyergyo-Belbor) are at only 500 to 700 metres further north. Again, remnants of the old land surface worn down before the Miocene movements and known to geologists as the Borescu platform, are at 1,200 to 1,300 metres in the Bihor and Apuseni Mountains, but at 2,000 metres in parts of the Transylvanian Alps. These examples suffice to show that these relatively recent movements have been more marked in the south, where, as a result, the contrast between Wallachia below and the mountain wall above is so splendid a feature. It seems that, already before the earth movements of the Pleistocene exaggerated the contrast just named, streams had eaten back through the mountain walls, for example, the Olt, or had linked themselves to and captured streams running between the mountain lines, for example, the Jiu. The Pleistocene period obviously brought great changes both through movements of land-blocks and through its climatic oscillations which were on a grand scale. Gorges were deepened as the mountain wall rose or Wallachia and Moldavia sank, and tributary streams were made to cut most impressive ravines that give the neighbourhood of Sinaia such a romantic character. Cirques near some of the highest hill tops preserve the direct evidence of ice action, but farther down there are few, if any, evidences of hanging

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* Strictly speaking, the term Bihor applies only to a small section of these mountains (see Fig. 1) but is often used in a more comprehensive sense.

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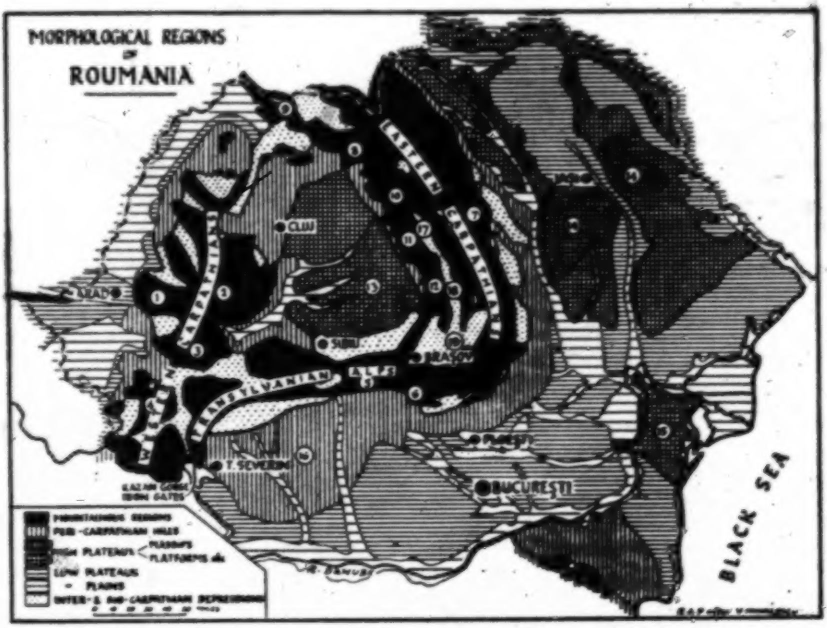
MORPHOLOGICAL REGIONS
OF
ROUMANIA
CLUJ
ARAD
SIBIU
BRAŞOV
T. SEVERIN
PLOEŞTI
BUCUREŞTI
KAZAN GORGE
IRON GATES
EASTERN CARPATHIANS
WESTERN CARPATHIANS
TRANSYLVANIAN ALPS
R. DANUBE
BLACK SEA
MOUNTAINOUS REGIONS
PERI-CARPATHIAN HILLS
HIGH PLATEAUS
PLAINS
PLATFORMS etc.
LOW PLATEAUS
" PLAINS
INTER- & SUB-CARPATHIAN DEPRESSIONS
MILES

FIGURE 1. The division near Braşov between the eastern Carpathians and the Transylvanian Alps should be noted. The term "Western Carpathians" is used by Mihailescu to include regions 1-4. The Dobrogea is classed by Mihailescu as a "mountainous region" but is shown here as a "high plateau" because it is of Hercynian age. The numbered regions are: (1) Bihor, (2) Apuseni, (3) Poiana Ruscă, (4) Banat, (5) Fagaras, (6) Bucegi, (7) Ceahlau, (8)-(12) Volcanic Mts., (13) Transylvanian Plateau, (14) Moldavo-Bessarabian Plateau, (15) Dobrogea, (16) Oltenia, (17) Giurgeu (Gyergyo), (18) Ciuc (Csik), (19) Treiscaune.

valleys, and it seems that the topography has been very much adapted since the latter part of the Ice Ages of the Pleistocene. The cutting of ravines is demonstrated magnificently in the case of the Iron Gates of the Danube.

THE above short historical or evolutionary summary of the physical geography may now be supplemented by a more definitely regional survey, the main features of which are illustrated in Fig. 1.

THE CARPATHIAN MOUNTAINS are made up of overlapping arcs, the main series including mainly altered Palaeozoic

133 and Mesozoic rocks, many of which have become crystalline. One of the main arcs forms the axis of the eastern Carpathians from just beyond the Czechoslovakian frontier to the northern border of the Olt basin; some rock west of Sinaia, much farther south, is sometimes considered an outlying part of this arc. The next main axis starts west of Braşov and stretches (with the name of Fagaraş Mountains and sharper relief than the previous arc) westward to the Banat, forming the Transylvanian Alps. In the west a third curve begins south of the last mentioned, in Oltenia, and sweeps around southwards to the Balkan mountain-line. This sweeping curve is heavily cut by faults, and streams working back along fault lines and other weak bands finally tapped the Hungarian basin so that its drainage poured over and deepened the cuttings to form the unique defile of the Kazan with the Iron Gates. The floor on which Pleistocene deposits accumulated in parts of the Hungarian plain lies 100 metres below the level of the rock under the Iron Gates, a sufficient indication that the tapping is a recent affair, as indeed the scenery of the long gorge abundantly testifies by the freshness of its great precipices arising direct from the powerful stream which is in places some 70 metres deep.

On the east side of the eastern Carpathian axis a long belt of Flysch, i.e. Mesozoic and Tertiary folded rocks, forms a subordinate mountain zone of varying width from Poland southwards to the Dambovița valley west of Sinaia.

On the west side of the eastern Carpathian axis a broad zone of volcanic accumulations stretches from the two Bistrița rivers northwards to the north of the Olt basin, but this zone is made less of a barrier by the fact that streams have sawn their way down through even this rock.

The Transylvanian Alps, especially in the zone known as the Fagaraş Mountains, almost reach an alpine height and character, but, even there, the greatest height is only 2,536 metres (8,320 feet) and in the eastern Carpathians the chief peak, Ceahlau (Ciahlau), attains only 1,908 metres (6,260 feet). Permanent snow and ice are therefore unknown at present and water-effects are much more prominent as factors of surface form than ice-effects. The results of block-uplift and faulting strike the observer, and undulating stretches of flowering high pastures dominate steep wooded slopes that bound terraced valleys often of a narrow kind.

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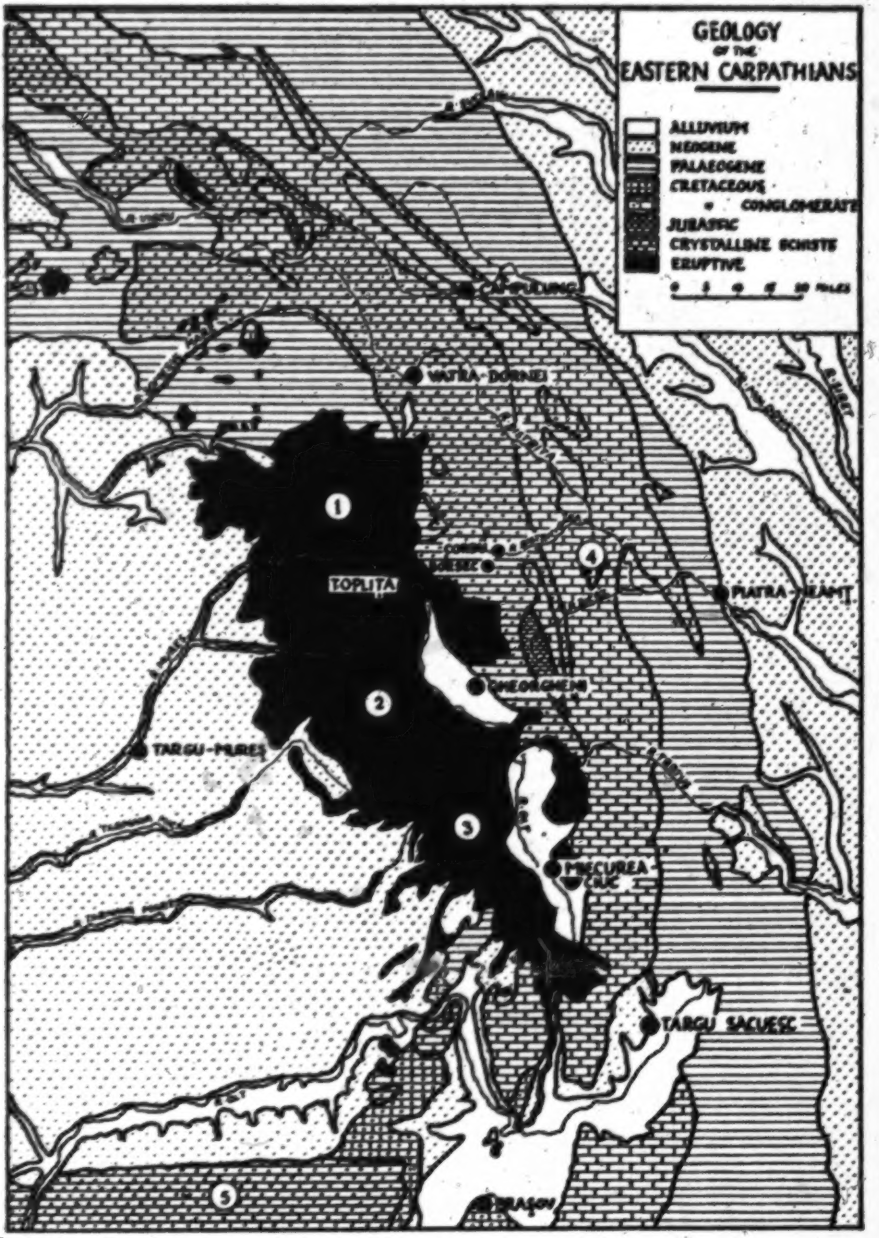
GEOLOGY
OF THE
EASTERN CARPATHIANS
ALLUVIUM
NEOGENE
PALAEOGENE
CRETACEOUS
CONGLOMERATE
JURASSIC
CRYSTALLINE SCHISTE
ERUPTIVE
0 5 10 15 20 MILES
CAMPULUNG
VATRA-DORNEI
TOPLITA
GHEORGHENI
TARGU-MURES
MIERCUREA
CIUC
TARGU SACUESC
PIATRA-NEAMT
BRAŞOV
1
2
3
4
5

FIGURE 2. (1) Căliman (Kelemen), (2) Gurghi, (3) Harghita (Hargitta), (4) Ceahlau, (5) Fagaraş

133 The prominence of the main axis of the eastern Carpathians north of the Olt basin and the occurrence there of the volcanic belt give to the mountain zone a strength it lacks further south where it is more broken in the zone along which the main axis is buried beneath later formations. When the south-east corner of the arc is turned heights increase and we approach the Transylvanian Alps with their deep-cut southern slopes and especially the through gap of the Olt. The high pastures, to a considerable degree isolated from the valley bottoms, are one of the most important characteristics of the country and have greatly affected its historical and economic evolution. Passes through the eastern and south-eastern Carpathians have also been of great importance for communication between the Russian steppe and the Moldavian platform on the one hand and the Transylvanian and Hungarian basins on the other. It is along these ways, rather than *via* the Danube at the Iron Gates or along detours near them, that movements of culture spread across, eastwards or westwards, in ancient times.

THE BELT east of the Carpathian arcs is generally called Sub-Carpathian and in its structural features it is obviously related to the mountains, but in its denudation it is more akin to the Moldavia-Bucovina-Bessarabia platform generally. This is mainly the result of Pliocene denudation, and there are traces of a higher platform above it, and a lower one beneath, the latter showing that after the main platform was developed there was some uplift and rejuvenation of streams. Considerable areas, especially along the rivers Siret (Sereth) and Prut (Pruth), are loess-covered, but large areas between 47° and 46° N. lat. have Pliocene formations at the surface. To the south again, towards the lower Danube, loess covers most of the country.

THE extent to which a direction parallel or slightly oblique to the Carpathian curve is developed in the drainage system is a feature of the land east of the Carpathians which contrasts markedly with the Wallachian drainage scheme. In Wallachia the long continuance of uplift of the Transylvanian Alps as above mentioned has greatly emphasised the southward slopes and a great number of streams run nearly at right-angles to the mountain axis across a plain covered by loess save in the west (Oltenia). These streams bunch on their way to the Danube and the eastern ones naturally

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PLATE I

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The road leading down to the Bicaz gorge which the river has cut through Cretaceous rocks just to the south of Ceahlau. *Photo: Miss M. Vines.*

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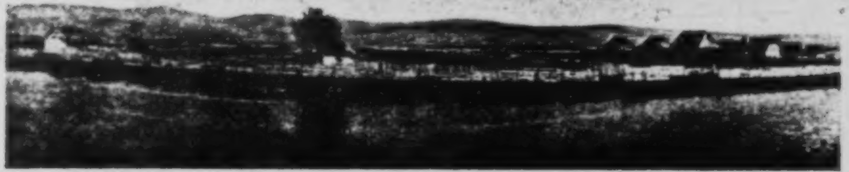
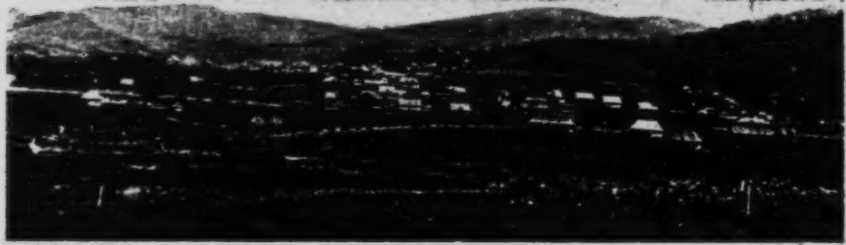


View looking across the tectonic basin of the upper Olt. *Photo: J. Crac.*



Bilbor—a characteristic "dispersed" settlement in a small intermont basin, most of the floor of which is given over to the production of hay. *Photo: J. E. David.*

facing page 12

133 trend eastwards as they go. Wallachia has a far greater proportion of its surface less than 100 metres above sea level than has Moldavia and the rise to the mountains is far more regular, as one would expect in view of the simple, consequent, character of much of the river system.

THE DOBROGEA beyond the lower Danube is not touched upon in the remainder of these studies, which are concerned with parts of the Carpathian region, but, for the sake of completeness, it should be explained that the Dobrogea is a platform extending northwards from the eastern end of the Balkan Mountains, based on a Permo-carboniferous mountain scheme which has been planed down completely, but these older rocks emerge towards the north though the land is low. The block they form is responsible for the main bends of the lower Danube which turns north when it meets the block and bends east again at the north-western corner of the block. There are considerable areas of loess on the eastern and southern parts of the platform.

TURNING now to the area within the Carpathian arc, the historic Transylvania, we note that the land is almost all more than 300 metres above sea level, a great part being over the 500 metre contour. The Transylvanian platform, at levels between 300 and 1,000 metres, is framed by the Carpathians on the east, the Transylvanian Alps on the south, and the Bihor and Apuseni Mountains on the west, save that in the last direction the westward-flowing Mureş (Maros) river occupies the depression south of the Bihor block and drains most of the platform save the extreme east and south-east, where the upper Olt takes a complex course dictated mainly by structural features. The Someş (Szamos), flowing like the Mureş to the Tisza (Theiss), drains the lowland between the north of the Bihor block and the Carpathians. The chief city of Transylvania, Cluj (Klausenburg, Kolozsvar) is situated below the north-east of the Bihor block. From the western part of this block the land grades down through the Banat of Timişoara (Temesvar) on to the Hungarian frontier and the Tisza.

THE TRANSYLVANIAN platform within its mountainous frame is floored in many parts by Pliocene or late Miocene deposits and true loess is not characteristic. It does, however, occur west of Transylvania in the plains towards the Hungarian frontier.

Plate II

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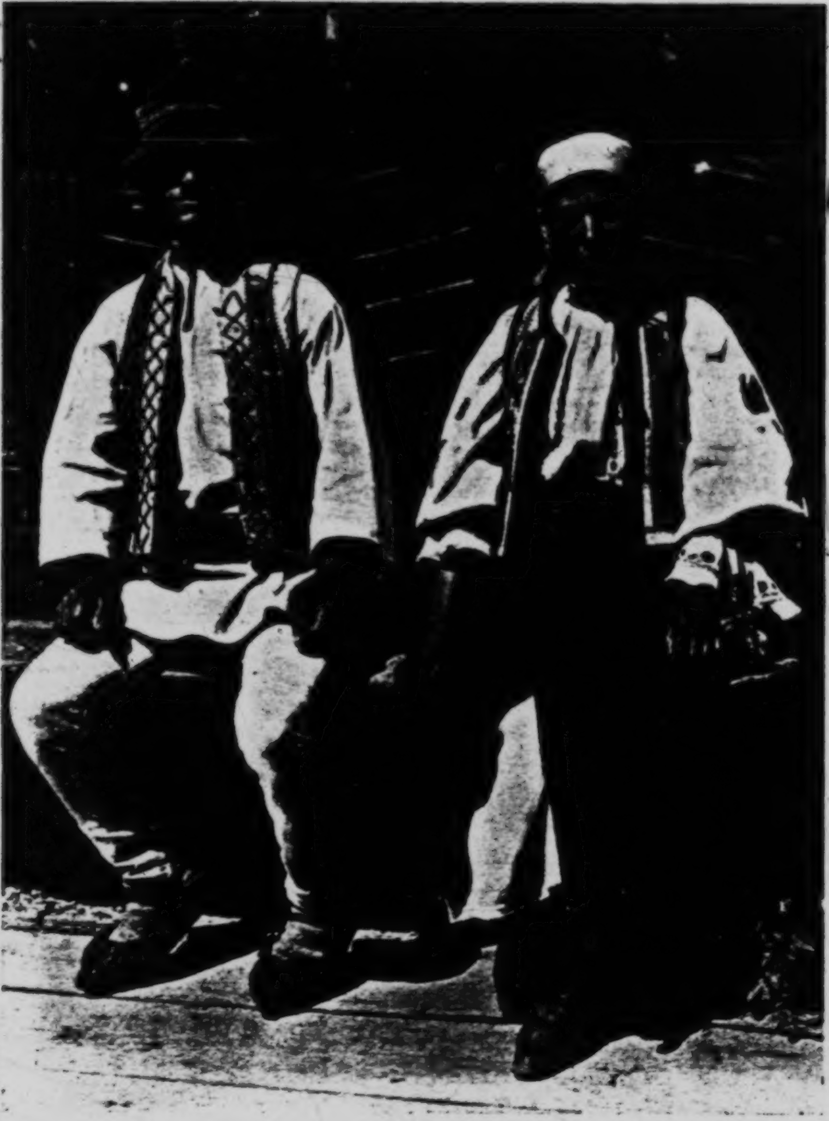

Roumanian peasants in national costume at the fair at Borsec. The man is wearing trousers of thick, home-woven material and home-made shoes, whilst the woman is wearing modern button boots. The coats are of sheepskin embroidered with coloured wool.

Photo: H. J. Howard.

facing page 13

II.—CLIMATE IN THE CARPATHIANS

132 In climate, as in structure, the Carpathian region is related both to Western Europe and to the steppe lands farther east, but it is essentially continental with the characteristic cold winter and hot summer, and usually a maximum of rainfall in June, delayed at Vatra Dornei (Dorna Vatra) until July. Dorohoi (Dorohoiu)—4.2° C.; Cernauţi (Czernowitz) —5.1° C.; and Vatra Dornei—6.4° C., have specially low mean monthly temperatures for January, the last named owing its low figure especially to its height (789 m.) above sea level, a fact which helps to account for its five months (Nov.-March) with mean monthly temperatures below freezing point as against three (Dec.-Feb.) in the other cases. On the Transylvanian side both Cluj and Sibiu (Hermannstadt) also have three months (Dec.-Feb.) with mean monthly temperatures below freezing point. On both sides of the Carpathians the mean monthly temperature is highest in July with figures round about 19.5° C. save in the case of Vatra Dornei which is considerably higher than the other stations named and has a maximum mean temperature of 14.2° C. delayed until July. Out towards the Russian plain the Dec.-Feb. period below freezing point and the January mean monthly temperature approximately correspond, allowing for difference of altitude. Iaşi, at 100 metres, has —3.3° C. in January and Chişinau (Kishinev), at 96 metres, has —4.0° C., but there the summer maximal mean monthly temperatures are higher and later, 21.2° C. at Iaşi and 21.9° C. at Chişinau, both in July with a continuation of these hot conditions into August. Chişinau has mean monthly temperatures below freezing point for four months (Nov.-Feb.). Beneath the south-eastern Carpathians at Focşani there are as before three months of frost, and the highest mean monthly temperature is 21.7° C. for July with a continuation of hot conditions into August. The range of mean monthly temperatures during the year is usually 23° C. to 25° C. but is lower, for lack of prolonged summer heat, at such a place as Vatra Dornei. Differences in temperature related to height-differences are as usual far more marked in summer than in winter in many cases, as in winter the inner valleys of the highlands may have long periods of intense cold if they are narrow and shaded from

132 the sun's rays and so may be much colder, especially during calm periods which are frequent, than places with southward aspect on the hills above: on occasion a difference of 20° C. has been noted. Places out in the opener lands towards Russia feel the winter cold of the steppe spreading westward, but both these and places in shut-in valleys may be very dry. The high pastures have a good deal of snow in winter and are nearly forsaken at that season but, when the snow melts in [137] spring, growth sets in rapidly, and the change of season is sudden. Out east in the opener lands there is, however, for a while a danger of the sudden recurrence of frost (the Ice Saints in the Russian steppe), a fact which helps to limit the eastward extension of the beech tree almost as much as does the summer heat, for both these conditions are specially harmful to the delicate beech leaves. Roumania is thus on the eastern limit of the general European distribution of the beech which is one of the characteristic plants of western and central Europe and is absent from Russia, save the Crimea and parts of the Caucasus region. It is important to note that winter cold is not an important factor of this distribution as the beech grows on the higher slopes of the Carpathians under severe conditions.

A MONTH with an average of less than 25 mm. (or 1 inch) of rain or the equivalent in snow is very rare save at Cernauţi, Dorohoi, Vatra Dornei and Chişinau in winter especially January. The summer maximum is in June at Dorohoi (102 mm.); at Cernauţi June and July both average 94 mm.; at Vatra Dornei June has 129 and July 135 mm. On the west side of the Carpathians, at Cluj and Sibiu, for example, the June rainfall is the highest (111-114 mm.), and the figures show a tendency to rather more rain in April and May as well as in July and August than on the east side. The annual totals on both sides of the Carpathians in the latitude of most of the places named may be said to vary between 550 and 750 mm. Farther south, on the east side, at Focşani, for example, the June rainfall attains only 82 mm. average, and May and July have 60 mm. and 57 mm. respectively; further, the annual total is just 550 mm. and at Buzau (Buzeu) rather farther south it diminishes to 476 mm., and at Constanţa to 381 mm. At Vatra Dornei it may rain on nearly half the days of the year, at Buzau on hardly a quarter. At Vatra Dornei, moreover, precipitation may be in the form of snow during any month save July or August. Thunderstorms are frequent in the afternoons during June and July but they rarely occur from November to March. Thunderstorm rain is thus a feature of summer in the Carpathians.

ON THE MOUNTAINS the winter anticyclonic calms often give clear skies while the spring and to some extent the summer until July are apt to be cloudy. Air may stream from the anticyclone on the heights to Wallachia and southern Moldavia and the Black Sea, so north-westerly winds are a marked feature in these lower lands in winter. In Transylvania though summer has most rain December is the cloudiest and August the clearest month.

IT IS CUSTOMARY to draw attention to the complete absence of the climatic conditions that are apt to prevail near the Mediterranean Sea. Roumania is emphatically un-Mediterranean in climate. Its relation is with western Europe on the one hand and the Russian steppe on the other. If a period of greater cold or increased precipitation, or both, supervened, the Carpathians could well develop a permanent snow cap, and it has been stated in the last section that there are cirques on some of the heights indicating that this has happened in the past. It would be very interesting to know whether any developments in this direction occurred during the cold, wet period of the west about 700 B.C. On the whole perhaps the indications are that the winters would have been harder rather than wetter to any great extent, but this phase may well have been followed by one in which, before warmer conditions were re-established, there was a lot of rain. During the Pleistocene Age, in one or other, probably in one of the later, of the glacial phases, if not in more, there must have been glaciers in the high lands with enormous amounts of flowing water in the immediately post-glacial stages. On the other hand, if a period of reduced rainfall, and perhaps greater summer heat, supervened, steppe conditions and æolian deposits would easily become a feature of Roumania, and there are abundant indications of their importance in the country at some early periods; loess is widely distributed not only in eastern Wallachia, the southern and eastern Dobrogea and middle Moldavia, but also in some of the drier upland valleys such as that of the upper Olt.

241 IT WILL be seen that structure and climate conspire together
132 to encourage a scheme of summer utilisation of high pastures
221 combined with valley cultivation that was much enriched
when the maize plant was introduced, but this was not so
long ago, and the older régime was none too prosperous both
because of climatic troubles in the highlands and especially
the sensitiveness of the wheat plant to abnormal seasons,
and because of the hindrances to organisation arising from
the diversities of language between governments and
371 subjects. The encouragement of industry was not easy
while some lignite and a little coal were the main sources of
power, but later on it became possible to use abundant
petroleum and natural gas and we have yet to see, in the
565 next generation, what influence they may have. Up to the
241 present, however, a true peasantry survives, and has
increased its hold on the soil; it still makes at home a great
proportion of what it needs, it still finds that in the hills the
maize crop may not ripen, and old communal schemes
relating to the high pastures remain important.

III.—NOTES ON THE VEGETATION OF ROUMANIA

137 After a voyage of five days down the Danube where hundreds of miles of its banks were clothed with willows (*Salix cinerea*) and formed our almost sole glimpse of vegetation, the first thing the Vegetation Group did on landing at Giurgiu was to make contact with the flora of Roumania. A walk along the side of the railway parallel to the river revealed the following species: *Xanthium speciosum*, *Trifolium fragiferum*, *T. lappaceum* (an alien possibly transported by rail or ship), *Setaria glauca*, *Datura stramonium*, *Berteroa incana*, *Trigonella procumbens*, *Althaea officinalis*, *Inula brittanica*, *Hibiscus trionum*, *Salvia sylvestris*, *Glycyrrhiza echinatum*, *Amaranthus albus* and many others less worthy of note and mostly belonging to the mid-European element.

During our visit to Snagov, where we enjoyed the kind hospitality of the Mayor of Bucureşti (Bukarest), we saw large quantities of *Vallisneria spiralis* growing close to the banks of the lake. Near the old monastery church the following plants were noted: *Xanthium strumarium*, *Astragalus acer*, *Galega officinalis*, *Chenopodium ficifolium*, *Filago arvensis*, *Nepeta pannonica*, etc.

243 Both on our way from Giurgiu to Bucureşti by train, and by the roadside on leaving the capital towards Ploeşti, we were reminded of the fact that the maize was the staple crop and it was here seen in the plains growing to perfection in striking contrast to that seen later around Borsec in the narrow valley towards Corbu.

Our next contact with vegetation was during the motor drive over elevated ground from Sinaia to Dobreşti; here the grass had not been cut in the sub-alpine meadows and the flora was seen to be a very rich one, but time did not permit of its being examined. From Dobreşti, a climb via a fine gorge was made to the alpine Peştera hut. On our way up the gorge large masses of the tall, yellow *Inula helenium* were passed and *Achillea Schurii* (endemic to the Carpathians) was seen on the wet walls of rock, and also *Bruckenthalia spiculifolia*. As more elevated ground was

137 reached there was little to be seen, the alpine meadows having been closely cropped by sheep. During an early morning walk in the neighbourhood of the hut, more alpine conditions were seen to be prevalent and plants typical of such regions were recorded, such as : *Ranunculus nemorus, Polygala amara, Genista tinctoria, Saxifraga aizoon, Alsine gerardi, Heliosperma quadrifida, Viola declinata* (endemic), *Gentiana nivalis, G. utriculosa, Campanula carpatica, Dianthus gelidus* (endemic), *D. spiculifolius* (endemic), *Pedicularis verticillata, Rhododendron Kotshyi* (endemic), *Sedum atratum, Pleurogyne carinthiaca, Phleum alpinum, Potentilla aurea, Anemone alba, Primula minima, Scorzonera rosea, Loiseleuria procumbens*, etc. Unfortunately a very heavy thunderstorm with torrential rain made it impossible to investigate the flora on the interesting plateau country passed shortly after leaving the Peştera hut on our way down to Buşteni.

BRAN was our next place of stay and the hill sides round the town proved very interesting floristically. Some 160 common plants were recorded in addition to *Coronilla varia, Impatiens noli-tangere, Actaea spicata, Monotropa hypopitys, Centaurea pseudo-phrygia, Nepeta pannonica, Trifolium alpestre, T. ochroleucum, Chaerophyllum aromaticum, Inula hirta, Erysimum repandum, Galinsoga parviflora, Salvia verticillata, Brunella grandiflora, Linum flavum, Hypericum transylvanicum, Scabiosa ochroleuca, Selinum carvfolium, Bupleurum falcatum, Seseli annuum, Luzula albida*, etc. Above the hotel was a considerable stretch of beech forest intermixed with spruce (*Picea excelsa*) ; on the lower edge of this was the usual hazel (*Corylus avellana*), alder (*Alnus incana*), Cornelian cherry (*Cornus mas*), hornbeam (*Carpinus betulus*), etc. At the foot of the slope on damp ground were 241 clumps of *Salices* and *Alnus incana*. Around the cottages on the hillsides were patches of potatoes with oats and sometimes a small patch of hemp ; some of this freshly cut and being retted in a shallow pit dug in the ground was also noted. Generally speaking, the flora around Bran itself was a very rich one. Close by the hotel the following species of Mycetozoa were seen : *Stemonitis hyperopta* on an old tree stump, *Arcyria denudata*, maturing on soil, and masses of *Mucilago spongiosa* ripening on old sticks.

137 [241] THE JOURNEY to Braşov (Kronstadt) took us along the valley, both sides of which were well cultivated, potatoes, beans, oats, maize being the chief crops; sunflowers and small patches of hemp were also seen. A halt for petrol, a short distance from Bran, provided an opportunity for studying the meadow land vegetation close to the road; the following were noted: *Scilla trilobium, Centaurea scabiosa, Coronilla varia, Hypericum perforatum, Medicago falcata, Peucedanum oreoselinum, Knautia arvensis, Campanula rotundifolium, Helianthemum chamaecistus, Stachys betonica, Dianthus Carthusianorum, Viola tricolor, Senecio aquatica, Trifolium procumbens, Achillea millefolium, Chrysanthemum leucanthemum, Campanula trachelium, C. rapunculus, Cirsium oleracea, Galium verum, G. Mollugo, Geranium pratense, Lathyrus pratensis, Melampyrum nemorosum*, etc.

AT BRAŞOV were seen *Potentilla canescens* and *Silene otites* among many commoner species.

IT WAS NOT until we reached Borsec that we had time to study the vegetation in any detail, and it was somewhat unfortunate that the truly sub-alpine and alpine regions were not within easy reach. The greater part of the mountain sides surrounding Borsec were covered with spruce forests quite to the summits and beech forest was not well represented, being met with as somewhat poor specimens often at a considerable height. These forests proved to be rather deficient in species, botanically.

DURING our walk from Borsec across meadows and up on to the summit of Bukkhavas, it was interesting to see the beech and birch above the limit of the spruce. *Ribes grossularia* was seen in fruit in open spots in the forest. The open summit was covered with *Vaccinium myrtillus* with its usual association; *Scorzonera rosea* was also growing upon the summit. Leaving the mountain and going down towards Bilbor we noted a grassy clearing with a building where cattle had been housed: this as in other cases was covered with a prolific growth of dock (*Rumex sp.*); it invariably accompanied places where mountain dairies had been established. On reaching the valley a fine clump of *Dianthus superbus* was seen.

244 A WALK around the cottages of Old Borsec revealed several vegetable gardens apparently associated with the possibility

244 of supplying the summer visitors with vegetables. Runner beans, potatoes, poppy-seed, cabbages, red beet, onions, lettuce, and carrots were common, and in one garden in addition to the above, red currants, gooseberries, vegetable marrows, fennel, caraway and leeks were growing.

137 THE following plants were noticed in the neighbourhood of Borsec: *Senecio fuchsii*, *Maianthemum bifolium*, *Gentiana cruciata*, *G. asclepiadea*, *Stachys alpina*, *Chaerophyllum hirsutum*, *Dipsacus laciniatus*, *Trifolium pannonicum*, *Myosotis sparsiflora*, *Carduus personata*, *Campanula cervicaria*, *Lychnis viscaria*, *Silene armeria*, *Dianthus armeria*, *Dianthus superbus*, *Salix pentandra*, *Turritis glabra*, *Calamagrostis epigeios*.

ONE very interesting area was visited by Capt. Chase, viz. the Red Rocks near Tulgheş (Tölgyes): on account of the number of interesting plants to be found there this area has been preserved under the care of the Botanic Garden of Cluj. Tulgheş is the village which comes next to Corbu and here the mountains rise up from the valley floor of the Bistricioara and are covered with forests, the spruce (*Picea excelsa*) being dominant and reaching quite down to the valley which here has an altitude of about 600 metres. It was noted that sparse deciduous forest occurred above the spruce, the chief trees being the pedunculate oak (*Quercus pedunculata*), hazel (*Corylus avellana*), ash (*Fraxinus excelsior*), hornbeam (*Carpinus betulus*), with scattered examples of lime (*Tilia cordata*) and poplar (*Populus tremula*). Climbing higher, a narrow belt of birch (*Betula verrucosa*) occurred followed by beech (*Fagus silvatica*), with examples of sycamore (*Acer pseudo-platanus*) and lime. Still higher up, as usual, there was summer pasturage for sheep. The conspicuous cliffs, the "Red Rocks," could be seen standing out above the forest, and near them Capt. Chase recorded the following: *Sempervivum hirtum*, *Arabis arenosa*, *Phleum montanum*, *Cytisus leucotrichus*, *Campanula carpatica*, *Senecio rupestris*, *Spiraea ulmifolia*, *Allium montanum*, *Libanotis montana*, *Thalictrum foetidum*, *Melampyrum saxosum*, and what was one of the chief objects of the visit, plants of the outstanding endemic *Astragalus Romeri* growing in a ravine between the rocks.

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THE VISIT TO MT. CEAHLAU.

One of the most interesting excursions botanically was that made to Mont Ceahlau, which forms part of the Moldavian Carpathians and rises in its most elevated part to just over 1,900 metres.

The mountain itself is formed of Cretaceous Flysch which is much folded; near the summit there were banks of sandstone and excellent examples of conglomerate.

Unfortunately, the mountain was a considerable distance from Borsec, necessitating a start at 6.30 a.m. and a long journey by car. As the same journey had to be made on the homeward route much less time was spent upon this interesting mountain than one would have liked. The ideal would have been to have spent at least one night in the well-appointed alpine "Cabine" upon the summit. With the exception of the climb to the Peştera hut after leaving Sinaia, Ceahlău was the only really typical sub-alpine region visited during our stay in Roumania. As we drove along the narrow road by the side of the small tributary stream, to the Durau monastery from which the ascent was made, the following plants were noticed: *Myricaria germanica*, *Petasites albus*, *Salix incana* and the large yellow-flowered *Telekia speciosa*; the three first-named are typical plants found in the neighbourhood of stream beds in such regions, the other had never been seen previously by any member of the Vegetation Group.

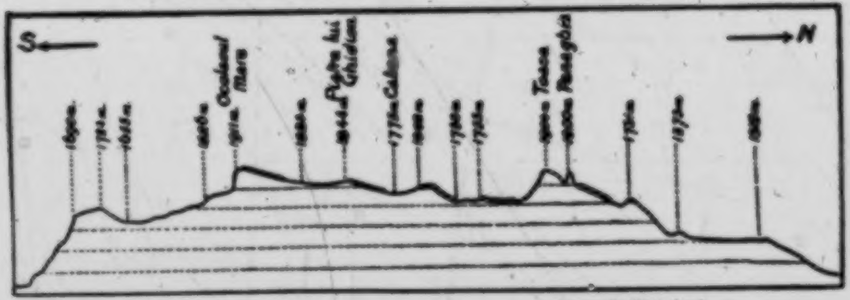

FIG. 3—PROFILE OF MT. CEAHLAU SEEN FROM THE EAST (AFTER E. NYÁRÁDY)

137 AFTER passing across the meadows near the monastery we passed successively through three definite zones of vegetation (see Fig. 3):

(*a*) The beech zone (*Fagus silvatica*).
(*b*) The spruce zone (*Picea excelsa*).
(*c*) The zone of mountain pine (*Pinus montana*).

1. THE BEECH ZONE, OR LOWER MOUNTAIN ZONE.

THIS reached up to a height of about 650 metres. The beech here was the dominant tree, the woods were somewhat thin and here and there one occasionally saw a very tall specimen with a perfectly straight bole and practically no branches except at the top. In this area there was also a number of rather weedy-looking birches (*Betula verrucosa*). The principal plants of this zone were *Pyrola uniflora*, *Circaea alpina*, *Impatiens noli-tangere*, *Geranium phaeum*, *Salvia glutinosa*, whilst among the woody elements were *Salix caprea*, *Alnus incana*, *Sorbus aucuparia*, *Sambucus racemosa*, *Corylus avellana*, *Populus tremula*, and *Acer pseudo-platanus*.

2. THE SPRUCE ZONE, OR UPPER MOUNTAIN ZONE.

THIS began at about 650 metres and reached to 1,700 metres, forming a broad belt which appeared to encircle the entire mountain as it could be seen all along the slopes as we mounted somewhat steeply. As is usually the case on mountain slopes the line of demarcation between this zone and the previous one was not at all clearly defined; here and there one intruded into the other as the result of the influence of the ecological factors in a particular area. In this spruce zone two other conifers are said to occur sporadically, viz., the larch (*Larix decidua* forma *carpatica*) and the Scots fir (*Pinus sylvestris*); on our ascent only an occasional example of the latter was seen.

IN the forest and the clearings and on the rocky walls were many plants and one could only notice a few in passing: *Daphne mezereum*, *Lonicera xylosteum*, *Ribes alpinum* and *R. grossularia*, *Allium victorialis*, *Listera ovata*, *Trollius europaeus*, *Aconitum moldavicum*, *Parnassia palustris*, *Linum catharticum*, *Alchemilla vulgaris*, *Epilobium parviflorum*, *Circaea alpina*, *Pyrola rotundifolia*, *P. secunda*, *Gentiana carpatica*, *Geum robertianum*, *Sanicula europaea*, *Centaurea*

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scabiosa, *Stachys alpina*, *Chrysanthemum rotundifolium*, *Salvia glutinosa*, *Arnica montana*, *Carlina acaulis*, *Lycopodium selago* and *L. clavatum*. In shady places several ferns occurred such as *Asplenium trichomanes*, *Phegopteris robertianum*, *Asplenium viride*, etc.

3. ZONE OF MOUNTAIN PINE (*Pinus montana* Var. *mughus*) OR SUB-ALPINE ZONE.

As one emerged from the spruce forests on to the plateau, the dominant feature was the masses of *Pinus montana* subspecies *mughus* with associations of the dwarf juniper (*Juniperus nana*) accompanied by *Vaccinium myrtillus*, *V. vitis-idaea* and *V. uliginosum*. In one instance *V. myrtillus* covered a large slope and peasants were gathering the fruits. Another characteristic plant covering a large area as we passed the path leading up the slopes to the summit of Toaca (1,904 metres) was *Dryas octopetala*, the light feathery fruits making the patch very conspicuous. A species of willow, *Salix Kitaibeliana*, was also noticed. As previously mentioned, the dominant tree of this zone is *Pinus montana*, met with in similar situations on our visits to the High Tatra of the Carpathians in Poland and Czechoslovakia, and to the Julian Alps of Yugoslavia. Its tortuous, flexible branches growing out close to the ground formed in places an almost impenetrable barrier. Some fine and very old specimens were seen bearing cones, and, from its characteristic features, it obviously belonged to the sub-species *mughus*. As is well seen in the photograph (Plate III), *Pinus montana* occurs either massed in association or in circular, flattened, isolated clumps. Occasionally where sufficient protection was afforded, small spruces were seen.

WHERE the mountain pine formed a large association it provided sufficient shelter for the development of *Vacciniæ* and mosses, *Vaccinium myrtillus* being dominant and *Hylocomium splendens* the commonest moss. In company with these plants one saw patches of Iceland lichen (*Cetraria islandica*), *Oxalis acetosella*, *Homogyne alpina*, and *Luzula silvatica*.

IT was in this sub-alpine region that we found many interesting plants and they may be grouped roughly under the following habitats :

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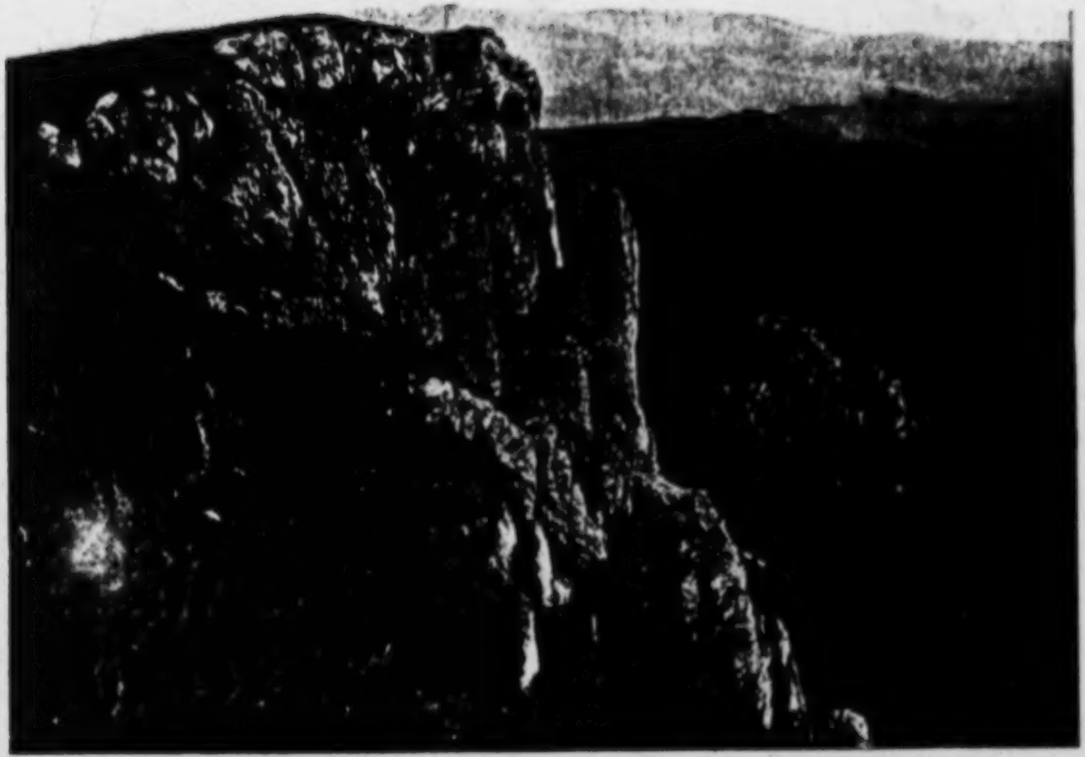
[facing page 24]

4: Fleure S-5 date) 1936 EDI Rumania EDI



Near the summit of Ceahlau, showing zone of mountain pine (*Pinus montana var. mughus*)—sub-alpine "Krumholzregion." The pine is seen in rounded clumps on the mountain slopes, but covers a large area on the flattened summit (see Vegetation notes).

Photo: H. J. Howard.

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(*a*) *Clearings and uncovered areas.*

The endemic *Primula leucophylla*, *Dentaria glandulosa*, *Soldanella hungarica*, *Veratrum lobelianum*, *Alyssum repens*, *Linum extraxilare*, *Alchemilla montana*, *Scorzonera rosea*, *Silene Zawadskii* (endemic), *Solidago alpestris*, *Erigeron alpinum*, *Doronicum austriacum*, etc. Among the *Gramineae* and *Juncaceae* were seen *Festuca supina*, *Nardus stricta*, *Sesleria caerulea*, *Calamagrostis villosa*, *Luzula silvatica* and *Luzula maxima*.

(*b*) *The sub-alpine meadow.*

Although there was little time to explore the very large area covered by this type of vegetation, several plants of distinctly alpine character were found and are regarded by Roumanian botanists as undoubted glacial relics. We were surprised to see several of these plants at such relatively low altitudes and were quite prepared to find that their occurrence was a floristic peculiarity of Ceahlau. Those noted were: *Pedicularis versicolor*, *Saxifraga oppositifolia*, *Polygonum viviparum*, *Saxifraga androsace*, *Dryas octopetala*, *Cerastium lanatum* and *Lycopodium selago*.

(*c*) *The Tundras.*

These occurred in the *Pinus montana* clearings and open slopes and as is usual in such habitats the chief elements were lichens, *Cetraria islandica*, and species of *Cladonia* intermingled with patches of *Vaccinia*. There were large rounded masses of mosses and the only woody element conspicuous in this somewhat dry region was the dwarf juniper (*Juniperus nana*). One could not help in passing comparing this type of vegetation with that seen on our visit to the Scandinavian plateau and also in the neighbourhood of Abisko in Swedish Lapland.

(*d*) *The Rocky Walls.*

Around the "Cabine" and still more pronouncedly around the summit of Toaca, where the underlying rocks were covered with a thin bed of humus, we met with our most interesting plants. Here grew, unfortunately overpicked by shepherd lads, Edelweiss (*Leontopodium alpinum*), *Eritrichium Jankae* (endemic), *Gypsophila petrea*, *Hieracium villosum*, *Sempervivum Simonkaianum*, *Saxifraga adscendens*, *S. oppo-*

4;Fleure S-5 (no date)1936 EDl Rumania EDl

142 PLATE IV

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Our shepherd guide down mountain side to Paltinis, on journey from Borsec to Vatra Dornei. He was milking sheep at a "stina."

Photo: H. J. Fleure.

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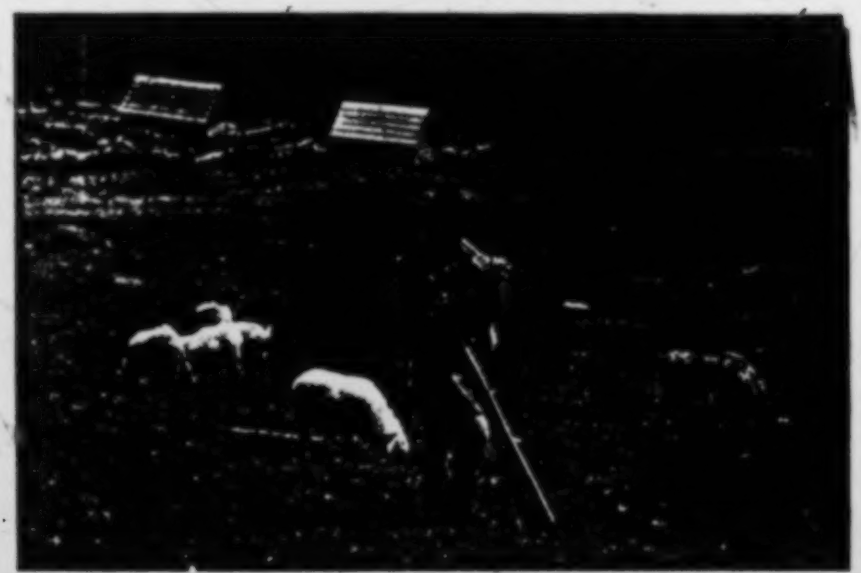


A mountain shepherd boy playing his wooden pipe near "stina"—seen on journey to Paltinis.

Photo: H. J. Fleure.

[Facing page 25]

137 *sitifolia*, *S. aizoides*, *S. aizoon*, *Erysimum Witmanni*, *Phyteuma orbiculare*, *Silene Zawadskii*, *Onobrychis montana var. transilvanica*, *Cerastium alpinum*, *C. lanatum*, *Oxytropus campestris*, *Alsine gerardi*, *Campanula alpina*, *C. carpatica*, *Alyssum repens* (endemic), *Rhinanthus alpinus*, *Rhodiola rosea*, *Sedum atratum*. In the cracks in the rocks where moisture collected were noted *Pinguicula alpina*, *P. vulgaris*, *Saxifraga aizoides*, *S. androsacea*, *Viola biflora*, *Arabis alpina*, *Achillea Schurii*, *Biscutella laevigata*, and *Androsace lactea*.

It was obvious that to make a detailed study of this interesting mountain with its forest, plateau, gullies, scree slopes, etc., and other varying ecological factors, a much longer time would have been necessary than was possible under the conditions of our visit to the country.

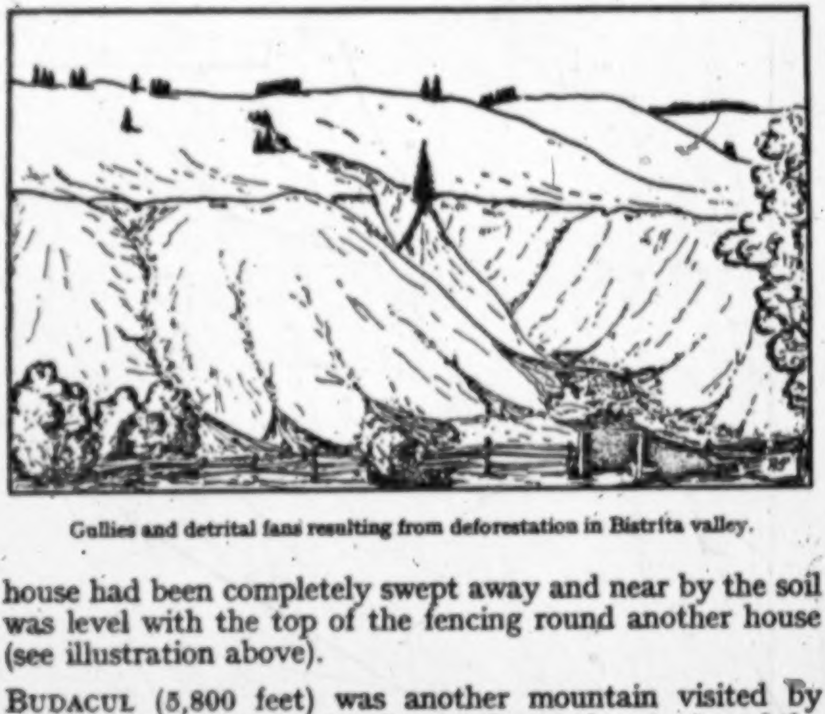
THE WALK BY WAY OF BILBOR, PALTINIŞ, VATRA DORNEI, ETC., AND DOWN THE BISTRITA RIVER BY TIMBER RAFT TO BROŞTENI (BROSCENI).

133 This interesting excursion was made by a number of the party, and afforded a very good opportunity of seeing the country as some fifty miles were covered on foot in two days. We passed over fine slopes and through delightful valleys with their meadows bedecked with many species of flowering plants. There was time during such a walk only to notice the most salient features of the vegetation. We, however, saw hillsides where sheep were grazed quite to the top, also 313 a mountain dairy where they were being milked. The temporary shelters for those cropping the hay in the valleys at some distance from their usual habitations were interesting, and the whole family appeared to sleep there and cook their meals till the area had been cleared.

531 During our stay at Vatra Dornei, through the kindness of 34 the mayor and the prefect of the district, we were taken by car over a mountain pass down to Campulung and from thence to the wonderful walled monastery of Moldoviţa (Moldawitza) with fine sixteenth-century frescoes covering 313 its walls. The chief point of interest from a vegetation point of view was the fine spruce forests which we saw and in which felling was in progress, the logs being pushed down the mountain side to timber carts at the bottom. The next day we had evidence of the importance of the lumbering industry

3 3 as we proceeded down the Bistriţa river on a raft of spruce logs to Broşteni. In this way thousands of logs are transported by the current to saw mills lower down the stream. Lumbering was seen *en route* as we passed between slopes covered with fine spruce forests with here and there beech woods and also areas covered with birch.

Leaving the raft at Broşteni we proceeded to Borsec by car and on the way saw an interesting effect of indiscriminate deforestation. On the slopes far too many trees had been cut down and a huge gully had been formed by a landslide; a house had been completely swept away and near by the soil was level with the top of the fencing round another house (see illustration above).



Gullies and detrital fans resulting from deforestation in Bistrita valley.

137 [133] Budacul (5,800 feet) was another mountain visited by members of the Vegetation Group. Spruce forest covered the slopes to a height of about 5,000 feet and there were no rocks. The last 500 feet were covered with mosses as well as *Festuca sp.* and the usual three *Vaccinia* with dwarf juniper (*Juniperus nana*). *Veratrum album* and *Hieracium* were the dominant plants in association with those mentioned on the summit, and in the woods below the following occurred: *Chrysanthemum rotundifolium*, *Scleranthus uncinatus*, *Scorzonera rosea*, *Ajuga genevensis*, *Meum*

137 *mutellina*, etc. The forester mentioned that beech forest was of no practical value but that hornbeam (*Carpinus betulus*) was sought after because of its hardness.

THE VEGETATION AROUND CORBU.

OF the vegetation around Corbu, the special village studied, little need be said: the hillsides had in many places been denuded of timber for building and domestic purposes throughout the whole length of the village.

THE following zones may be distinguished:

241 1. THE ZONE OF THE VALLEY BOTTOM (BISTRICIOARA).

THIS was devoted to agriculture, but the maize was poor in comparison with that seen on the hot Wallachian plains; patches of barley occurred chiefly on the south-facing slopes, and there were small patches of potatoes and hemp; hay was cut on the meadows near the river and on the lower slopes.

2. THE ZONE OF FOREST.

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313 SPRUCE was the dominant tree, but on the church side of the village, particularly towards the Borsec end, stretches of Scots pine (*Pinus sylvestris*) had evidently been planted just above the valley floor. This was presumably to retain detritus and to consolidate the soil as they were planted much too closely to have any economic value for timber. Conversation with the forester on Runcul above Tulgheş confirmed this fact and Dr. Pop, the botanist at Cluj, also mentioned that *Larix decidua* var. *polonica* had been planted above Corbu. The schoolmaster said that the valley floor and lower slopes had originally been covered with trees and that wood was very cheap but labour was dear. Timber plays a very great part in the domestic economy of a village like Corbu, being used for building, furniture, carts, looms, winding frames, etc., as well as for fuel.

THE TRAIN JOURNEY FROM TOPLITA (OLAH TOPLICZA) TO CLUJ.

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137 FINALLY the train journey from Topliţa to Cluj afforded another opportunity for observing the crops grown. All along the railway in the Mureş valley much maize was

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grown with sunflowers round the edges of the fields ; little tent-like stacks of hemp were seen drying, and on one occasion a field of tobacco was noticed. The common tree was the false acacia (*Robinia pseudacacia*). Along the stream sides one invariably saw the flowering rush (*Butomus umbellatus*). Vines were seen growing around Rasboeni.

A VERY interesting salt marsh area was noticed before reaching Cluj, large areas being covered with sea aster (*Aster tripolium*) and a species resembling sea lavender (*? Statice gmellini*) recalling the vegetation of the salt marshes on the North Norfolk coast around Blakeney, etc. AT CLUJ we were privileged to visit the fine Botanic Gardens under the guidance of Prof. Emil Pop, and saw the special floras of the various regions of Roumania.

IN CONCLUSION I should like to mention my indebtedness to Miss Vines and Capt. Chase for their observations and lists of plants from various areas which they visited.

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IV.—PEOPLES AND SETTLEMENTS: EARLY TIMES

131 **The position of Roumania** with its mountain ramparts forming an outpost of central Europe, over against the south Russian steppe on the one hand and the Balkan peninsula on the other, has been emphasised in a brief review of its features and relief and climate. The same fact of position is most important in the study of its human relations throughout history, and here it is necessary to emphasise once more that relations between the south Russian and Hungarian plains in the far past have been carried on *via* the Carpathian passes rather than by the Iron Gates which may well have been impassable until Trajan's engineering feat made a platform along the right bank, and the temporariness of that construction suggests that the grim defile did not remain in use. To what extent some detours not very far away may have been utilised at various periods is a matter for research.

172 **Too little** is known concerning Roumania in the Old Stone
174 Age to permit of any useful discussion, but the country was
much affected when, in the relatively short Neolithic period
heralding the advent of metal, a cultivating population was
spreading westward through central Europe. It is a matter
for further research to decide to what extent south Russia
and to what extent Thrace were routes of this first peasant
[177] civilisation in its spread westwards. The earliest agriculturists
of Roumania, in their equipment, show relationships
or participation of ideas with contemporaries in the Ukraine,
in the Balkan peninsula, including Vinça near Belgrade, and
Thessaly, and in north Hungary, Roumania yielding specially
important material from Cucuteni, near Iași, from Erösd
in the south-east of Transylvania, and from Tordos in central
Transylvania on the upper Olt. The former has yielded
figurines that are female and steatopygous, but without the
large breasts and general development of fat that occur in
some other centres. The pottery is painted, and on the whole
it seems that, at this stage, the Ukraine was richer; we may
well be dealing with a spread that was to some extent westward,
using passes of the south-eastern Carpathians (Fig. 4).
At the same time it should be borne in mind that the Olt,
the Mureș and several other rivers of Transylvania yielded

gold, while copper was found in those regions as well, so the desire for these materials may have brought settlers here apart from the general spread of pioneering cultivators which is perhaps better attested further west. In Lower Austria and Moravia the equipment of the very early cultivators includes ornaments of Spondylus shells that in several cases have come from the Mediterranean, indicating already at that primeval stage of the development of civilisation those wide-ranging links which seem so generally to have been, and to be, factors of progress. This thought is further supported by a knowledge that the Roumano-Ukrainian area seems to show links with far-off Elam, north-east of the Persian Gulf.

WE MAY provisionally picture the pioneers of settlement and cultivation as spreading from the south-east some time in the latter half of the third millennium B.C., as yet shifting their villages from time to time, probably because schemes of rotation in land-use and of dung-manuring had not come into operation. They seem to have preferred sites on the Loess as would be expected, because that material is fertile, and usually less wooded than areas of clay subsoil. They apparently met and probably incorporated into their groups remnants of older hunting groups, but they were concerned with cultivation, apparently using especially stone hoes ground into the shape of a shoe-last. Hoe cultivation suggests, by analogy with modern Africa, that a good deal of the work was done by women. The figurines show that great importance was attached to the idea of fertility, symbolised by woman; this is often described as "Worship of the Mother-Goddess," a description that may be correct, or may perhaps give a somewhat too definite impression. That sooner, rather than later, the early cultivators interested themselves in gold washing and in copper seems to stand out fairly clearly. They became considerable artists in pottery, and appear to have built rectangular houses with a porch, partly open, and an inner room. The possible relationship of this (Megaron) scheme to later ones in the Aegean and Greece, leading right on to the classical Greek temple, gives it a great interest; it is widely agreed that the main ideas of the construction of the classical Greek temple were derived from forested lands well to the north. The houses appear to have often been agglomerated, as one would expect, and the group had a rampart-ditch around it. The people used bows

172 174 and arrows and valued deer-horn for making holders for stone axes and for other purposes. Later, perhaps, hunting became more important, and incised ornament on the pottery became a feature here as it was also further west-north-west.

THERE SEEM indications that, as time passed, aristocratic herders spread among the early cultivators, and they emphasise connections between the Ukrainian steppe and Hungary across the south-eastern Carpathians and down the Mureş. Copper axe-adzes, some with a median hole for the shaft, have been found at various spots, chiefly in Transylvania, as Childe has well shown. It is thought that the hole was punched through the heated metal and not cast. Ornaments and other details suggest that the aristocracy at least had some connections with the Aegean, and bronze was gradually introduced, as a copper-antimony alloy at first. Parvan has emphasised the importance of the Carpathian area in the Bronze Age, with fine workmanship in bronze and gold, and, in the late Bronze Age and the transition to the early Iron Age, the culture connections seem to have been mainly westward, the analogies with north Italian bronze cauldrons being specially noteworthy. There are several indications that in this period, which, in Europe, seems to have been one of dry warm summers, the south Russian steppes were relatively empty. Probably the previous spread across the south-eastern Carpathians had brought westward horsemen, either already armed with the sword or about to learn to make it, a weapon that would suit cavalry better than the axe-adze of older days. In the transition from bronze to iron the Transylvanian Carpathians were thus the eastern limit of an area including Hungary and North Italy, while southward they were linked with Attica. Agriculture had doubtless improved, settlements had become more or less permanent as it is likely that a rotatory scheme of soil use had been evolved; craftsmanship in gold and bronze for luxury objects had reached a high level.

175 THE PICTURE changes again dramatically round about 700 B.C., through two mutually supplementary influences. Firstly, the climates of Denmark and Switzerland became colder and wetter, so probably that of the Carpathians felt the influence of a lowering of the snow-line and an impoverishment of agriculture and craftsmanship. Iron work had

175 become widespread further west but had hardly reached our region before local decline set in. Secondly, the Russian steppe had become active once more with moister conditions, and the Scythians spread westward, with iron weapons and bronze-pointed arrowheads, through the Carpathian passes into Transylvania and beyond, as well as into Wallachia, where, however, they do not seem to have got through the Iron Gates, though they very probably spread into Yugoslavia. Scythian graves in Roumania are often poorer than those in South Russia, and no doubt Scythian bands were spreading through the Carpathians as they did through Polish Galicia farther north, and into Wallachia as well as via the Dobrogea into Thrace farther south. The old aristocracy of the previous period was apparently temporarily submerged under the barbarian conquerors who scattered in small groups and melted in due course into the general population. Some time after about 550 B.C. Greek trade came northward *via* the river mouths opening to the Black Sea, and Greek cities attained great strength, but did not really Hellenise Roumanian lands; perhaps the Greeks' idea of themselves as contrasted with the barbarians gives some clue to this.

CELTIC CONQUERORS spread eastward and had great influence in the Roumanian area, the early traces, dating perhaps from the fifth or the fourth century B.C. being important in eastern Transylvania and showing a civilisation using bronze and iron, and adapting ideas of ornament brought from farther west but ultimately derived from the classical world (the La Tène culture). It was apparently especially between 200 B.C. and 100 B.C. that the Celtic La Tène civilisation became dominant in this part of the world. It favoured houses crowded together to the number of nearly a hundred, built of wood, or of reeds and mud, and the clusters or villages were on defensible sites over a river or lake in many cases; there was, as in the previous phase, a large survival of fashions from the very early days of agriculture. Fortresses were built by nobles, and included terraces rising up to the central princely residence, often blocks of stone in the ramparts were kept in position by wooden beams, a scheme of building the Romans found widespread among Celtic-speaking peoples, and called the *murus gallicus;* this scheme has of course regional variations. In the mountains of

175 Roumania one of these fortresses at Gradistea Muncelului was built with enormous labour based on extensive organisation at a height of 4,000 feet above sea level. It was the work of a King Burebista who ruled over a large territory. Celtic conquerors penetrated northern Roumania on their way to the Ukraine, and touched southern Roumania on their way to Asia Minor. They brought to the Carpathians the potter's wheel and eventually made iron fairly common, but gold was apparently less abundant than before. The last feature has long been known for the corresponding phase of culture in the west, and has sometimes, rather too readily, been put down to exhaustion of gold supplies from river sands.

From very early times the people of this region maintained the habit of cremating the dead, though the Celtic conquerors and others before them favoured interment. Indeed, we get an impression of persistence of the simple folk with a simple early culture under a long succession of conquerors. The connections with North Italy already important in the phase of transition from bronze to iron, and revived in marked fashion by the Celtic peoples, became Roman connections, and after much difficulty the Roman Empire brought the region into subjection, the Roman province of Dacia occupying most of modern Roumania except Bessarabia. It was under Roman rule from A.D. 107 to A.D. 255 with a lingering of that rule until the official evacuation in A.D. 270-275. The Romans were different from previous conquerors in that they developed regular communications and organised agricultural and military settlement, and in Roumania they found the ground as it were prepared for them by earlier Italian connections with Transylvania mentioned just above. Christianity, in this instance at first of western rather than eastern type was brought into Roumania and the clerical leaders no doubt promoted the persistence of Latin elements in the language and helped the more or less latinised peasantry to maintain itself and its Roman tradition for some centuries after direct Roman rule was withdrawn. In Gaul the bishops in their cities maintained a good deal of the Roman tradition through the Dark Ages when trade routes were cut by the advance of Islam and northern barbarians were giving very inexperienced treatment to the ills of a decayed Roman rule. But in the west so much was maintained that in the end the cities

175 revived with, under the circumstances, the Cathedral as
their focus of expression. In Roumania fate worked out
things differently. The seventh to the tenth century in
east-central Europe saw much forest cutting and planting
of villages, and the widespread languages of these settlers
belonged to the Slavonic family which may have had its
[197] early home in or near Polish Galicia. This linguistic influence
penetrated Roumania and combined itself with the Latin
heritage to make the later language of the country. Magyars
passed through on their way to the Hungarian plain, and
[184] Huns and Visigoths had gone that way before. So the local
tradition weakened along the valley and lowland ways and
kept itself alive in the highlands where still dwell people who
are no doubt largely descendants of the primeval cultivators
with many waves of culture washed over them but the
Roman influence vital still.

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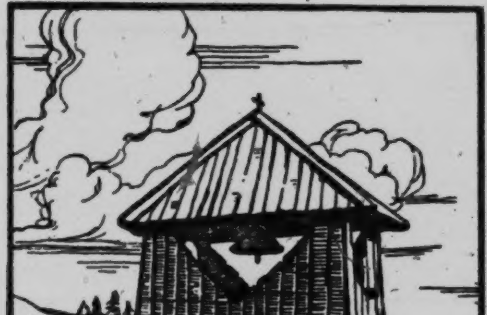

Bell tower, Borsec.

4:Fleure S-5 (nc date)1936 EDl Rumania EDl

V.—PEOPLES AND SETTLEMENTS: THE POST-ROMAN PERIOD

101 MOUNTAIN REGIONS are often regarded as the refuges of conquered peoples and the repositories of cultures that once flourished in the plain, but although the highlands of Roumania have, from time to time, absorbed groups of folk for whom the lowlands offered insufficient security, the population of the Carpathian valleys must not be regarded as racial sweepings from the broad human highways of the Steppe. The long period of invasions that followed the withdrawal of the Roman legions from Dacia led to a concentration of Roumanians within the mountain areas of either Transylvania, whence they spread later to reoccupy the plain, or the Balkans, where their descendants, the Vlachs, still maintain their traditional form of life ; but, since those early days, their numbers in the former region have been considerably diluted by Saxons and Szeklers who have come in not as refugees but as outposts against Tatar and Turk in what for long remained an eastward frontier zone of western Christianity.

125 OUR KNOWLEDGE of events during the Dark Ages is necessarily scanty, but it is clear that settled life on the open grasslands where, indeed, it was possible at all, was subject to constant interruptions. One of these interruptions, the result of Magyar pressure, is of special significance for the history of Roumania from both a political and a cultural point of view. The Magyar invaders of central Europe in the ninth century penetrated far to the west before meeting with any serious resistance. After their defeats at Merseburg in 933 and at Augsburg in 955, however, they fell back towards the Hungarian Plain, and about A.D. 1000 their Szekler
175 advanced guards began to penetrate the hill country of
Transylvania. In spite of their comparatively recent Asiatic
795 origin, the Szeklers introduced certain features of western civilisation into their newly-acquired territory, particularly feudalism, which appears to have been the chief concomitant of the Roman Catholicism that they had adopted while in the plain.

THE spread of Roman Catholicism towards the east brought it into conflict in the eastern Carpathians with the Greek

175 795 Orthodox Church, which was extending its influence northwestwards. The ensuing struggle continued until the seventeenth century, when a compromise was effected and a new church, the Uniate, arose. Strictly speaking, this was a new branch of Roman Catholicism, for its members recognised the suzerainty of the Pope, although they kept the ritual of the Eastern Church (see Figure 7).

175 THESE contacts with the west were strengthened in the thirteenth century, when groups of Saxon crusaders settled in Transylvania at the invitation of the Magyar kings. They became established first of all near Alba Julia (Karlsburg), in the Mureş valley, and later on in the region of Mediaş (Medgyes) on the Tarnava Mare (Nagy küküllö) ; in the neighbourhood of Sibiu, which they named Hermannstadt ; and near the mines of Rodna in the north. Feeling that the Carpathian frontier to the east and south was still insecure, Andrew II invited the Teutonic Knights to occupy strategic points that were undefended, with the result that Kronstadt (Braşov), commanding the Prahova valley, and Campulung were built. The Teutonic Knights quarrelled with the Magyar king, however, and left this area, which was taken over by the Saxons. The defence of the eastern Carpathians, with their two important passes of Ghimeş (Grymes) and Oituz (Oitoz), was entrusted to the Szeklers (see Figure 4).

BEHIND these frontier posts the Saxons were organised in seven colonies under the authority of a count, and they enjoyed various civil privileges in return for the military duties which they performed. The Szeklers were at first grouped in three colonies of a similar character in the tectonic basin of Treiscaune, but they were dislodged by the Tatars in the thirteenth century and sought refuge in the lowlands of Ciuc and Giurgiu where they are still numerically strong (see Figure 7).

DURING the early Middle Ages, the Roumanians were organised in semi-autonomous local groups, each village being under the charge of a chieftain or "kneas" (*pl.* knesi) who combined the functions of military leader, administrator and judge. Although stock-raising was the main occupation of these villagers, arable farming was also practised, and the meagre stretches of cultivable land were divided up amongst

175 the various families according to their needs. The pastures and forests, however, were kept in the hands of the community.

THE latter part of the thirteenth century was a critical period for these people; the Tatar invasions were over, and the Turkish invasion had not yet begun. Many of the Roumanian peasantry moved out from the mountains and re-established themselves in the foothills of the Carpathians and of the Transylvanian Alps. The pressure from the west was maintained, however, and the Roumanians became organised on a more strictly military basis. Much of the power of the knesi was usurped by the "boyars," a new military aristocracy that arose, whilst the peasants were gradually forced into a serfdom from which they were not emancipated for several centuries. The various kneaseates became united into small states, under the leadership of princes or "voivods," and were welded eventually into the two principalities of Wallachia and Moldavia. The success was short lived, however, for by the end of the fourteenth century Wallachia had fallen under the control of the Turks, and Moldavia soon followed.

THE STRUGGLE against the Turkish invaders was long and bitter; the ways through the mountains needed constant vigilance; the necessity for maintaining a united front against a common foe strengthened the communal spirit; and it is not, therefore, surprising that the alien groups in Transylvania should have preserved their individuality to a remarkable degree. This is particularly noticeable in the case of the Saxons, whose settlements to-day are veritable microcosms of Germanic culture (see Plate V).

[101] ALTHOUGH they originally had a common purpose, these two racial groups of Saxons and Szeklers have remained very different in character, for whereas the Saxons are still very largely confined to the settlements which they established in the early Middle Ages, the political, and to some extent the ethnic, boundaries of the Szeklers have been enlarged from time to time until they now encompass a considerable area of Transylvania.

144 OF the early history of the Szeklers we know but little. Racially they appear to differ somewhat from the Magyars of the plain, and to approximate more to the Roumanians in

4:Fleure S-5 (no date)1936 EDl Rumania EDl

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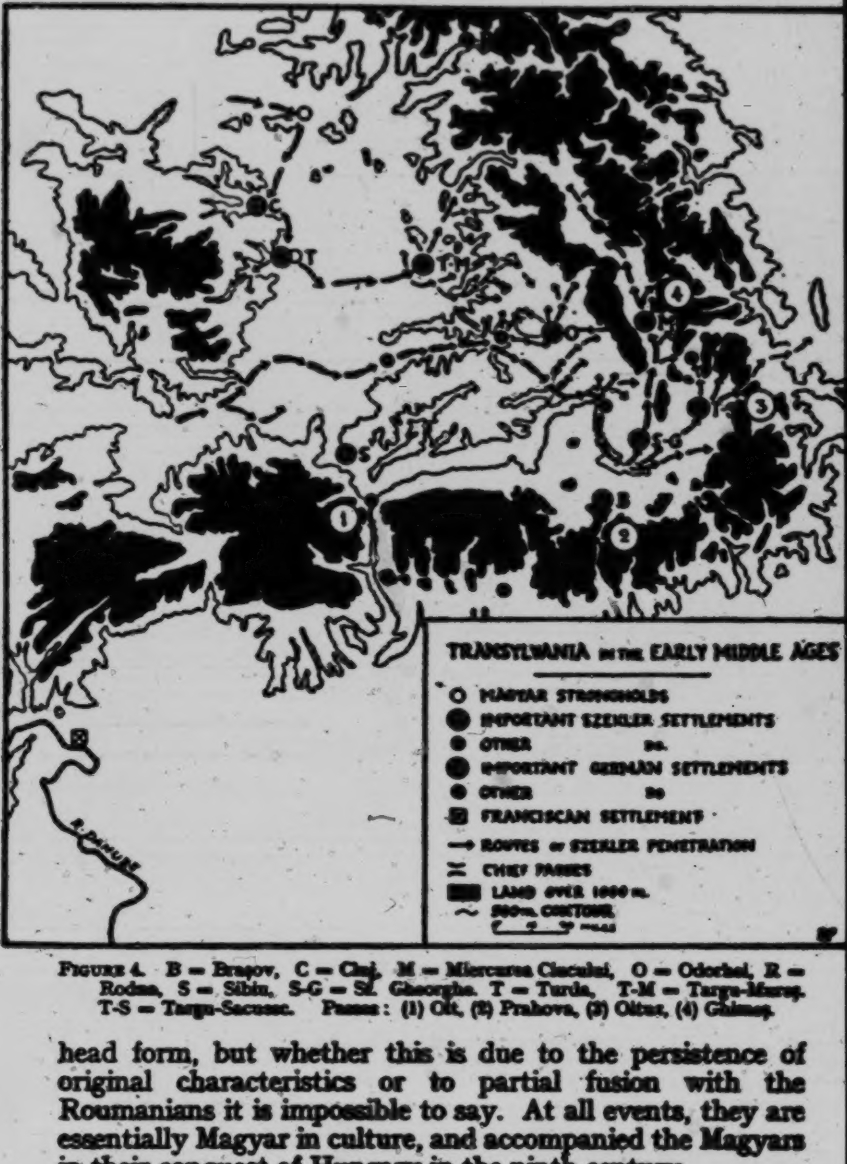
TRANSYLVANIA IN THE EARLY MIDDLE AGES
○ MAGYAR STRONGHOLDS
● IMPORTANT SZEKLER SETTLEMENTS
● OTHER DO.
● IMPORTANT GERMAN SETTLEMENTS
● OTHER DO
☒ FRANCISCAN SETTLEMENT
→ ROUTES OF SZEKLER PENETRATION
CHIEF PASSES
LAND OVER 1000 m.
~ 500m. CONTOURS
MILES
R. DANUBE
C
T
T-M
S
B
1
2
3
4

FIGURE 4. B = Braşov, C = Cluj, M = Miercurea Ciucului, O = Odorhel, R = Rodna, S = Sibiu, S-G = Sf. Gheorghe. T = Turda, T-M = Targu-Mureş. T-S = Targu-Secuesc. Passes: (1) Olt, (2) Prahova, (3) Oituz, (4) Ghimeş.

144 head form, but whether this is due to the persistence of original characteristics or to partial fusion with the Roumanians it is impossible to say. At all events, they are essentially Magyar in culture, and accompanied the Magyars in their conquest of Hungary in the ninth century.

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FIGURE 4 shows that their penetration of Transylvania followed the valleys of the Mureş and its tributaries, which

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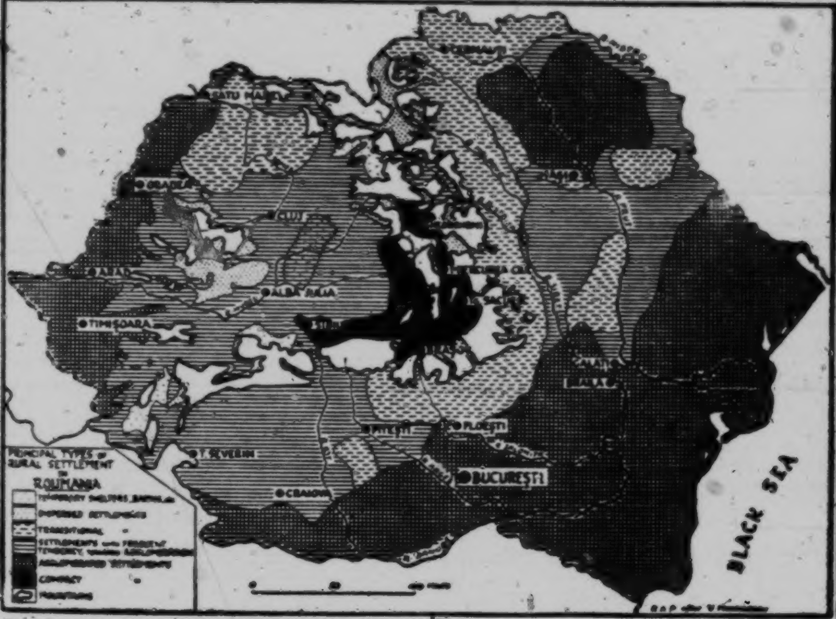
SATU MARE
CERNAUTI
ORADEA
CLUJ
IASI
ARAD
ALBA IULIA
TIMISOARA
SIBIU
T. SEVERIN
CRAIOVA
PITESTI
PLOESTI
BUCURESTI
BRAILA
BLACK SEA
PRINCIPAL TYPES of RURAL SETTLEMENT in ROUMANIA
DISPERSED SETTLEMENTS
TRANSITIONAL
COMPACT

FIGURE 5. The distributions shown are only approximate, but they show the broad distinction between the typical Roumanian settlements ("dispersed" and "transitional") of the mountains and foothills and the compact Saxon and Szekler settlements of the Transylvanian lowlands.

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1.78

led naturally towards the tectonic basins of Treiscaune, Ciuc and Giurgiu, though these were not actually occupied until the thirteenth century. The Szeklers did not, however, displace the indigenous Roumanian population in these lowland areas; neither have they maintained the same degree of "contiguous isolation" as have the Saxons. During the nineteenth century in fact, there has been a steady assimilation of the Roumanian peasantry, some measure of which may be gained from the fact that since the middle of the century a Roumanian majority has been changed into a Szekler majority in 169 communes, whereas the reverse process has been effected in only 28 communes. In the former case, large numbers of Roumanians have adopted the dress and religion of the Szeklers, but the Roumanian

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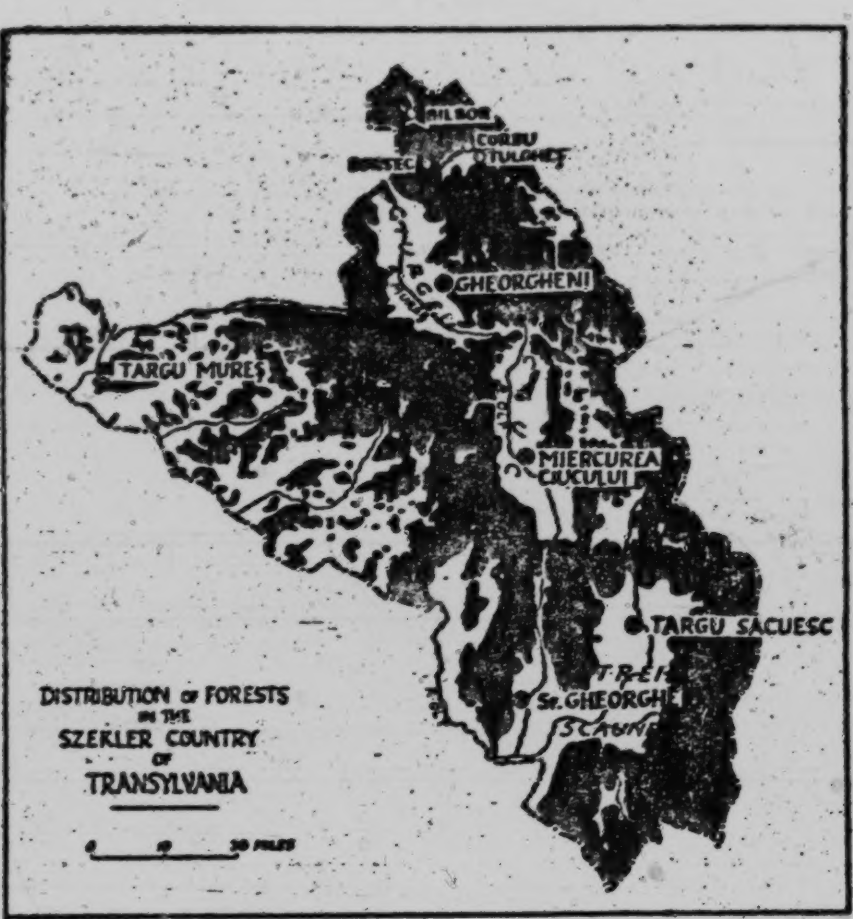
BILBOR
CORBU
TULGHEŞ
BORSEC
GHEORGHENI
TARGU MURES
MIERCUREA CIUCULUI
TARGU SACUESC
TREI SCAUNE
St. GHEORGHE
OLT
DISTRIBUTION OF FORESTS IN THE SZEKLER COUNTRY OF TRANSYLVANIA
0 10 20 MILES

FIGURE 6. This illustrates the sharp distinction between the forested highlands and the lowlands, and should be compared with Figures 5 and [illegible].

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majorities have resulted from the valleyward movement of families that had previously farmed the slopes overlooking these intermont basins.

361 .361 AN IMPORTANT distinction between the Roumanians and the rest of the population is seen in the types and distribution of their settlements (see Fig 5). The former, with their customary attachment to highland areas and to pastoral life, are usually associated with a dispersed or loosely agglomerated

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type, whereas the truly compact or nucleated type is found only in regions settled by Saxons and Szeklers (see Fig. 8). It is difficult to determine how far this distinction is ethnographic and how far it is the product of differences between two sharply contrasted environments. Generally speaking, in eastern Transylvania the mountain population is Roumanian and the lower lands are peopled by Saxons and Szeklers, environments which would normally suit the dispersed and compact types respectively. On the other hand, the Roumanian steppe villages which one would expect to be

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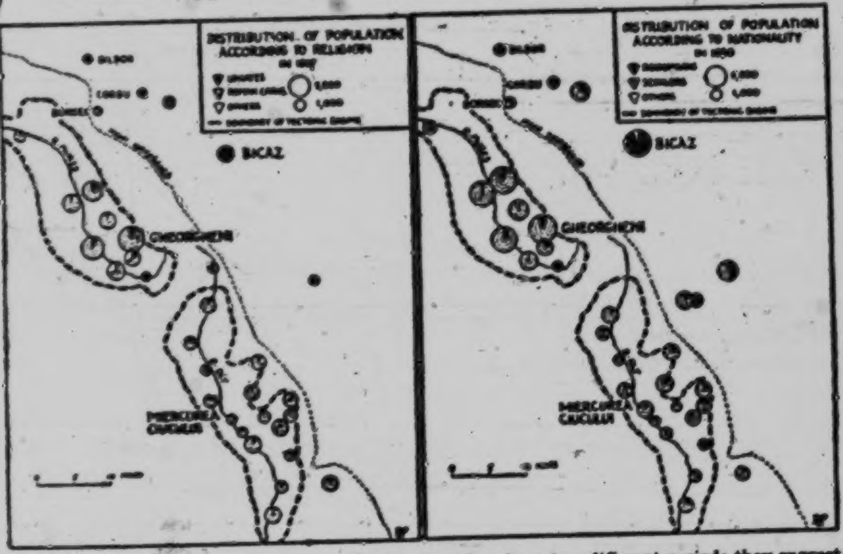
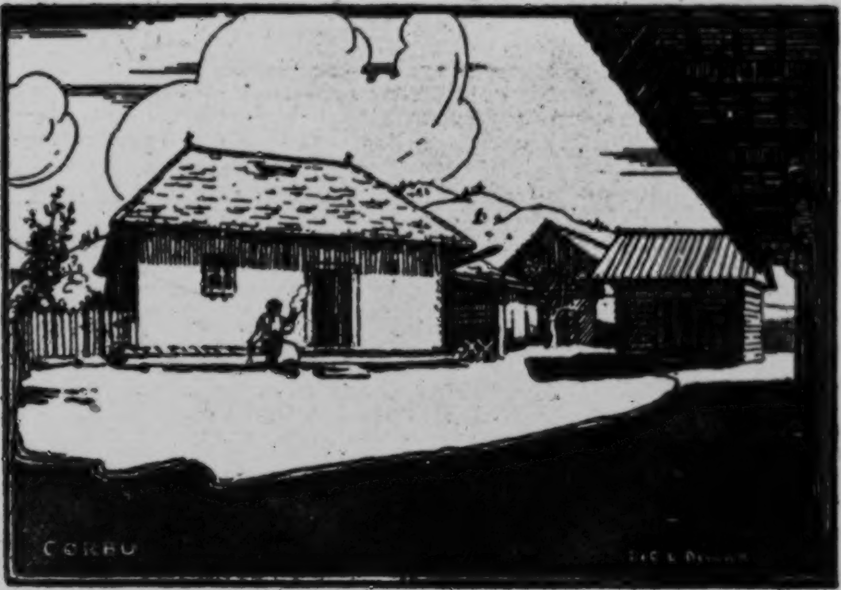
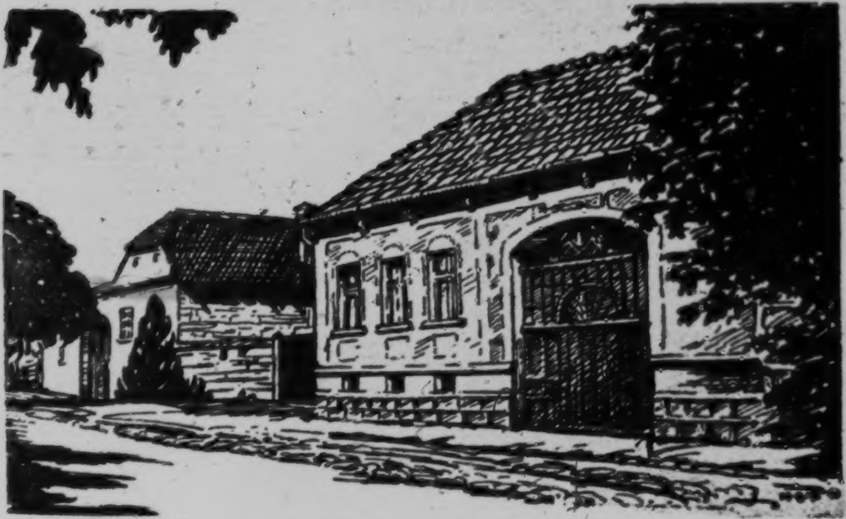

DISTRIBUTION OF POPULATION ACCORDING TO RELIGION
BILBOR
BICAZ
GHEORGHENI
MIERCUREA CIUCULUI
DISTRIBUTION OF POPULATION ACCORDING TO NATIONALITY
BICAZ
GHEORGHENI
MIERCUREA CIUCULUI

FIGURE 7. Although the statistics have had to be taken from two different periods they suggest a close correlation between nationality and religion in this section of the eastern Carpathians. The concentration of Roumani[illegible] in the hills and Szeklers in the plains is also very marked.

compact or nucleated differ from those of the Saxons and Szeklers in this important respect: whereas the houses in the latter are often contiguous, those in the former, although closely packed, are almost invariably detached. Even where the amount of space available for building is very limited the Roumanian prefers to surround his house with a garden, and, where ample space prevails, orchards in the foothills and the plain and hay meadows in the highlands tend still further to segregate the dwellings. In small upland basins such as that of Bilbor the "village" may occupy hundreds of



A plan of this farmstead is shown in Fig. 10, with which it should be compared.



German Farms in Cristian

[facing page 42]

36 acres, each house, apart from a small agglomeration around the church, being separated from its neighbours by what is almost an unfriendly distance.

THE most typical Roumanian settlement, then, is one that may be broadly described as "scattered," with a tendency towards dispersion in the mountains and nucleation in the plains. It is one that admirably suits the varied geographical conditions of the country, for it is essentially elastic and capable of adaptation to almost any environment. We shall have an opportunity of studying one more fully in Chapter VII.

IN the Eastern Carpathians it is generally true to say that on the west of the main water-divide all settlements above 800 metres are of the dispersed type, except where they command passes, whereas those on the floor of the tectonic basins are nucleated. The former, of course, are mainly inhabited by Roumanians, the latter by Szeklers. The intermediate zone, which would normally be characterised by villages of the "scattered" type, has become largely depopulated owing chiefly to erosion that has followed unregulated deforestation of the lower slopes (see page 27). Even on the floors of the basins, where the population density is greatest, villages are tending to desert the river banks and to become concentrated at the foot of the slopes on account of the flooding that has resulted from the increased run-off. Huge detrital fans are another by-product of the same process, and are seriously impinging upon the already limited stretches of cultivable land.

ON the Moldavian side of the water-divide the more characteristic form of "scattered" village prevails, though giving place in the plain to a more compact type, and higher up, where opportunity allows, to dispersion. Although there are several small highland areas of relatively flat land in the eastern Carpathians, there is nothing to compare with the great stretches of plateau in the western Carpathians, which have been cleared of forest and utilised for the cultivation of grain crops at an altitude which in the former will support only pastoral activities. And although permanent villages (of the dispersed type) are found as high as 1,200 metres in the Bihor, the only habitations at a corresponding height in the eastern Carpathians are the dairies of the transhumant shepherds that are occupied only during the summer months.

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Brasov—the Market Place. Behind the shops rises the mediæval Gothic church, which contrasts strikingly with the churches of the Greek Orthodox communities. *Photo: Dr. C. P. [illegible]*

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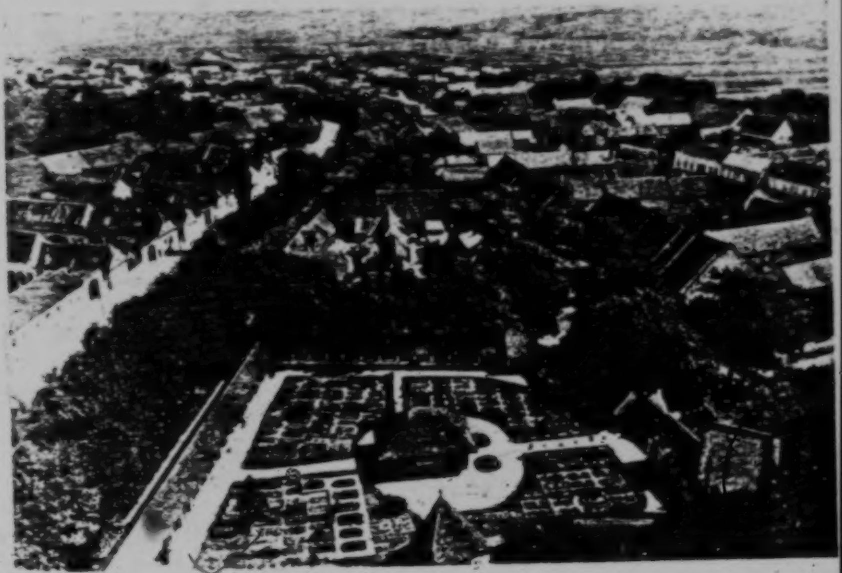

Cristian (formerly Neustadt), a typical Saxon compact village near Brasov. The individual farmsteads are grouped closely together and present a somewhat forbidding appearance from the road. The well laid-out area in the foreground is the cemetery. *Photo: Roumanian Pres*

[facing page 44]

233 221 TRANSHUMANCE has long played a prominent part in the pastoral life of the Carpathians, for agriculturally the region is marginal and it is not very unusual for the maize crop, which covers an astonishingly large proportion of the arable land, to fail to mature. Before the late war the flocks of the eastern Carpathians used to winter in the plains of Moldavia, Bessarabia, the Dobrogea and south Russia, more rarely in Transylvania. During the nineteenth century, however, many Roumanian shepherds stayed in the plain and formed the nuclei of small permanent Roumanian colonies outside the boundaries of Transylvania.

423 311 DURING the last few centuries there have been considerable changes in schemes of land holding. In the late eighteenth century the scattered possessions of the landlord class were consolidated into Latifundia. In the first half of the nineteenth century arable farming was extended into the Danubian plain and on the rich lands between Siret and Prut—in areas, that is to say, which had not been previously cultivated. This development progressed with the rise of an export trade in cereals to feed the industrial populations of the west. It is interesting to note that much of this newly-developed territory in Wallachia was organised on the system of métayage, the new colonists from the hills becoming tenants on a produce-sharing basis.

IN CONNECTION with this development, many of the Roumanian transhumant herdsmen gave up their pastoral life and settled as agriculturists or went into commerce. After 1918 the large estates were broken up and plots of land were given to the peasantry. This was the occasion for the return to Transylvania of some of the former emigrants who had gone to Wallachia and Moldavia, but naturally many features of the old life have disappeared, e.g. the July fairs that were formerly held high up in the mountains and did much to preserve the cultural heritage of the pastoral people.

[221] BUT, if large-scale seasonal migrations over long distances have declined, the short distance movements still play a vital part in the rural economy of the eastern Carpathians and fortunately have not as yet been divested of all their old-time ritual.

PLATE VI

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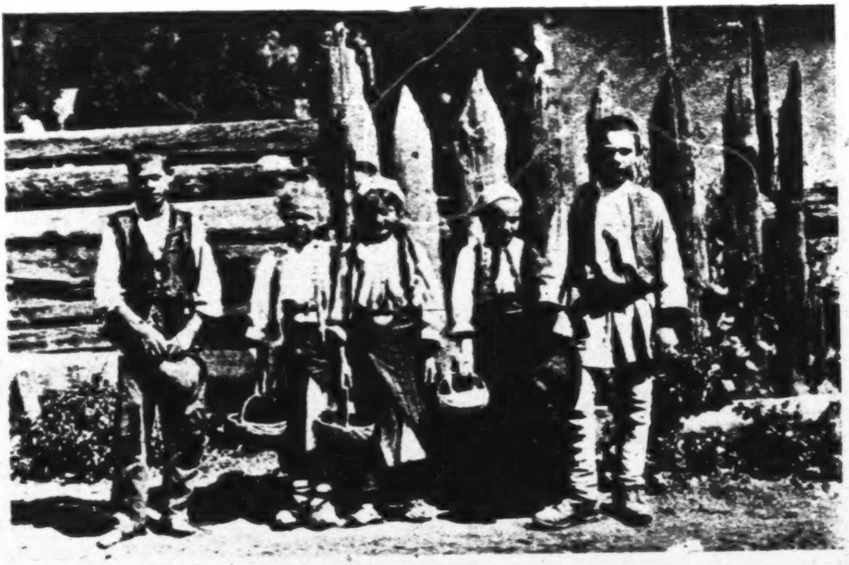
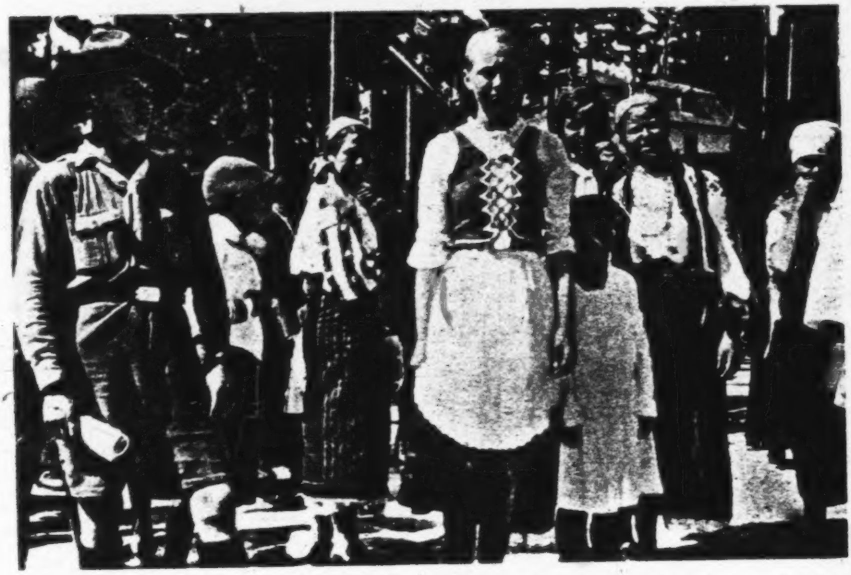


A group of Corbu children. The girls are Roumanians, the boys Gipsies, the broad-headedness of the former contrasting markedly with the narrow-headedness of the latter. *Photo: R. A. Pelham.*



A group of peasants at the Borsec Fair. The girl in the foreground is a Szekler, her costume contrasting with those of the Roumanian women behind. *Photo: Miss M. Oddie.*

[facing page 45]

VI.—ECONOMIC ROUMANIA

AGRICULTURE.

311 162 MODERN ROUMANIA is essentially an agricultural state, as was the Old Kingdom (43 to 46 per cent of the land being arable and 22 per cent forest, whilst over 80 per cent of the population of 18 millions are agricultural workers), although it has valuable potentialities for the development of industry.

132 241 134 ARRANGED in zones round the bastion of the southern and eastern Carpathian highlands, the main agricultural regions of post-war Roumania exhibit, according to aspect and altitude, a considerable variety of climatic conditions, which is reflected in a varying emphasis in the selection of crops raised. In general, we may say that the continental nature of the climate and the resulting succession from north to south and from highland to lowland of soils, graded from poor ashen-grey podsol in the Carpathians through oak-forest loams to a rich chernoziom in the south-eastern Danube plains, has resulted, wherever the ground is sufficiently level, in a concentration on grain production. The heavier rainfall of the uplands, the relatively great humidity and shelter from the driving winds that sweep across the open plains, coupled with the exposure of less [137] fertile rocks—granites and coarse sandstones—explains the large area of forested land (24.5 per cent, nearly 7½ million hectares) in those districts that extend into the Carpathian highlands.

243 OF THE 13 odd million hectares of arable land, cereals occupy some 37 to 39 per cent. Production varies greatly from year to year and from district to district. In the old kingdom of Wallachia-Moldavia, maize is by far the heaviest crop, particularly in Oltenia, where the summer rainfall is heavier. It is also the heaviest crop in Transylvania, the cultivated areas under maize, wheat, barley and oats being [262] respectively 4, 3, 2 and 1 million hectares. Maize is the staple crop of the peasant holder almost throughout the country, for it not only provides the bread cakes and the "mamaliga," maize pudding, the main food of the mass of the people, but also fodder for the cattle to eke out the hay in

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372]
the winter; moreover, the annual life of this cereal is short, freeing the ground for other uses. In the plains, the maize stalks are used for fuel. The proportion of land devoted to maize has therefore increased since the agrarian reforms and the expropriation of much of the land of the large landowners.

THIS CONCENTRATION on maize production by the peasant farmer has its dangers, besides handicapping the country from the point of view of export. In a succession of dry summers a poor maize crop has a disastrous result where there are no root crops and no winter wheat to fall back on. The cultivation of potatoes and lucerne is being encouraged, but peasant farming is backward throughout the kingdom, though less so in Transylvania and the Bucovina than in the Old Kingdom.

THE MOST intensive maize cultivation is found in the departments of Gorj and Valcea and Muşcel in Oltenia (the sheltered valleys of foothill country of Oltenia) and that of Bacau in the upper Trotuş basin of Moldavia. In these districts, where the annual rainfall is in the neighbourhood of 600 mm., with an early summer rain maximum and a dry autumn, over 50 per cent of the agricultural land cultivated is under maize ; but, with the exception of the Black Sea coastlands, the bulk of Roumania has only between 30 and 50 per cent of the cultivable land under cultivation devoted to maize. True, in the higher valleys of the Carpathians, the maize not infrequently fails to ripen, owing to the early onset of cool weather, but early ripening species of maize are sown in the Carpathian valleys. Again, a dry spring and early summer is a grave menace to the crop. It is unfortunate that the least nourishing and latest ripening type of maize is, owing to its high yield, that most favoured by the Vlachian peasant.

WHEAT.

IT IS only in Transylvania that wheat assumes a rôle approaching in importance in the peasant agricultural régime to that of maize. It was being cultivated, however, before the War on an increasing scale, on the large estates of Muntenia, where the steppe type of climate and rich soil conditions (chernoziom on loess and the black and brown

243 soils of the oak forest) prevail, and where the low rainfall is inimical to maize cultivation. Wheat is an important crop also on the well-drained soils of the Tertiary loess-covered plateau, on which chernoziom also develops, between the Prut and Siret. Here, below 1,000 feet, wheat is extensively grown, for here again the climate approximates to the steppe type. Grain began to be exported from the Danube plain depression in appreciable quantities only in 1833, the year of the great Russian famine, but in thirty years it had taken the place of grazing land and meadow over all the Black Earth region. The breaking up of the large estates, however, and the unsettled conditions during and since the War have checked the development of large-scale wheat production for export. After the War, the production of grain of all sorts fell off heavily as a result partly of a heavy tax imposed on grain export, partly of uneconomic farming due to the subdivision of estates, partly of the Government's taking over the marketing of wheat and rye and fixing prices for those commodities—a policy which discouraged production of these crops by the peasants, who concentrated on the production of maize, with barley and oats for home consumption in the wetter highlands. In any case, the yield of wheat in regions of steppe climate varies enormously from year to year with the winter and spring precipitation, and even during the period of normal progress in the decade preceding the War the export varied between nearly 2 million tons and less than 200,000. In spite of the rich soils, the yield per acre is small judged by western European standards.

Barley does very well as a peasant fodder crop in the dry south-east of the Old Kingdom, and is a crop of some importance in Transylvania (1½ to 2 million hectares). In Moldavia and Oltenia under moister conditions, the high starch content makes it useful for brewing, and it is grown mainly on the larger estates.

248 **Hemp and flax** are grown, the latter decreasingly, by the peasants for use in domestic textile industry. Imported cotton yarn has largely taken the place of linen.

245 As regards the vine—the best grapes for wine are produced in small holdings in the hill country of Transylvania (chiefly produced by the Saxon communities), Wallachia and

4:Fleure S-5 (no date)1936 EDl Rumania EDl

THE BISTRITA RAFT PLATE VII

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Captain and crew. *Photo: Dr. C. P. Snodgrass.*

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Passengers.

These two photographs give a good impression of the gorge-like character of the transverse section of the Bistrita where it is cutting through crystalline schists. *Photo: R. A. Pelham.*

[facing page 48]

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PLATE VIII

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[facing page 49]

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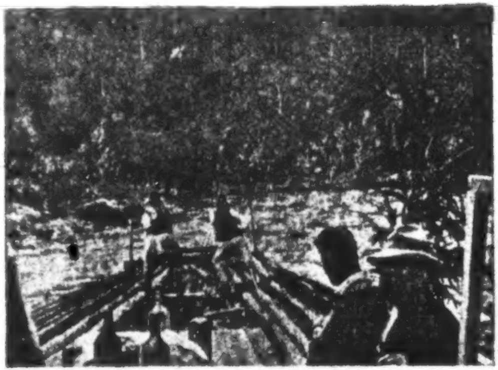

Shooting the rapids on the Bistrita.

Photo: Dr. H. Densby.

241

Harvesting by hand on the level Danube plains.

Photo: Roumanian Press.

The above illustrations from blocks kindly loaned by the B.B.C.

291

Spinning with a distaff—an occupation symbolical of the traditional life of the Roumanian peasantry in the hill country.

Photo: H. J. Howard.

245 Moldavia, where the spring and copious early summer rains and the luminous late summer provide advantageous conditions. The use of American stocks, resistant to the phylloxera, has proved successful particularly in Moldavia. Bessarabia supplies about 40 per cent of the acreage under vines, and Wallachia about 23 per cent. The quality of the wine is much below the quality of the grapes, the peasant finding the production of ţuica, a spirit simply distilled from the ubiquitous plum, a less difficult and exacting undertaking. There is no export of wine worth mentioning.

231 Before the Great War the rearing of animals, which had played an important part in the economy of Roumania in the early nineteenth century (providing an export to Turkey of sheep and horses from the lower Danube lands and of army horses to Prussia) had been giving way rapidly to grain cultivation. Since the War, however, the number of sheep, cattle and horses has increased, in spite of the great losses in the areas overrun by the enemy. The subdivision of the land into small holdings has been a factor in the increase of animals, for every peasant aims at having a few sheep, a couple of cows and a pig or two. In Transylvania, the development of cattle breeding had been scientifically encouraged, breeds peculiarly suited to various districts being improved. There are three types of permanent pasture in Roumania—the flood plain pastures of the Baltea and of the wider valleys in general, available for grazing in the winter and spring, the permanent meadows of the plains, which can be grazed only in the spring before the summer drought sets in, and the high pastures in the forest clearings, available during the summer months. The provision of winter fodder where the flood plains are not available is a serious problem, and one to which the Ministry of Agriculture is turning serious attention, for the cultivation of fodder crops is very little developed. Hay is harvested painfully one to three times in the year in the rich alpine pastures of the Carpathian valleys and is eked out in the peasant communities with maize stalks and straw. The small mountain cattle are the best milkers but of not much service for draught or for butchers' meat. The sheep is far more important in the peasant economy, providing cheese, wool for the domestic loom and mutton—for the most part dried. In Transylvania the cattle are mainly of the Hungarian steppe type with a

231 considerable admixture of cross-bred Swiss. On the Wallachian plains we find a cross between the Moldavian cattle of the plains and the Hungarian type which gives good milk, is easily fattened for market, and makes a good draught animal. Throughout the Danube plains the powerful water buffalo is important for draught purposes and for milk, and may be seen frequently also in the Transylvanian plains.

FOREST.

137 RICH in ploughland and not ill-provided with pasture, Roumania is fortunate in a third type of land utilisation which brings her vast acreage of mountainous upland into service. Forest covers about one-quarter of the land surface. Its greatest development occurs on the sandstones of the Flysch formation. Coniferous trees clothe the higher slopes above 1,400 metres, particularly on the Moldavian and Bucovinan frontiers of Transylvania. Below the coniferous forest zone with its peaty, acid soils, stretches the zone of beech forest, mixed, on its lower edge, with oak. (It is the beech forest that has given its name to Bucovina.) Here the characteristic soil is the leached, ashen-grey podsol, yielding poor crops in the clearings unless heavily manured. This zone tongues up the valleys into the coniferous zone. It widens to 100 kilometres in the Siret and Olt basins, but narrows in Muntenia, where the high mountains drop abruptly to the agricultural plains. The beech, unfortunately, has little economic value, and to this, with its poor soil, may be attributed the survival of so large a part of the beech forest. Its chief use is for firewood.

THE OAK FOREST on the lower slopes and foot hills, with its relatively rich brown soils, has naturally suffered most at the hands of settlers, and survives to-day mainly on the ridge combs and hill-tops. There are several species of oak, and hornbeam, lime and elm appear here and there in the oak forest with beech and birch on the upper margin of distribution. In Transylvania the lower hill country has been practically cleared of forest.

33 TIMBER is one of the mainstays of life of the peasant. All the constructional work of his village—dwelling house, barns,

313 church, fencing, roofing, flooring, is of timber, and also many of his household utensils: water-buckets, jugs, spoons, etc.

It is very unfortunate that the most lucrative type of timber should be the most inaccessible. Timber from the great stands of pine has to take the slow and tortuous route down the rivers in rafts (see Plates VII and VIII) to the Danube and Black Sea. Afforestation has not reached a high stage of development as yet. The trees are propagated by naturally-sown seeds, and there are very few nurseries. Where the clearings are made, the stumps are left in the ground to add to the difficulties of the hay harvester.

221 We may sum up the tale of Roumania's agricultural assets by saying that she is well endowed by nature as regards soils and climatic conditions for the wide-spread production of grain, fruit and vegetables; that natural pasture, whether upland or lowland, is seasonal and insufficient for a satisfactory development of cattle raising, though much may be done by an intensified cultivation of fodder crops. The increased provision of communal grazing for the peasants has been a useful step. Conditions are better for sheep, which are more adaptable than cattle and are better able to stand the rigours of the hard winter. Transhumance is everywhere practised with these animals: those of the great plains moving from the Danube lowlands in the spring to the hill pastures in the summer. Local transhumance of cattle, sheep and pigs from villages of the upland valleys to the high dairies is the rule.

LAND TENURE.

241
423 Agricultural conditions, past and present, and the marketing of the products of land-utilisation are so closely bound up with conditions of land tenure that it is relevant to include here a short summary of those conditions.

In the period immediately preceding the outbreak of the Great War, 50 per cent of the land of Old Roumania was in large holdings (over 250 acres), and in the Bucovina, where the Roumanian peasants' holdings were pitiably small, 60 per cent. About 40 per cent of the holdings were of less than twenty-five acres. In Old Roumania and Transylvania the average was only eight acres per family, in the grain lands of Bessarabia eleven, but in the Bucovina uplands

241 423 only three and a half. But 50 per cent of the registered large holdings were farmed in small parcels by peasants who paid rent largely in kind or in services to absentee landlords or large tenant holders, mainly Jews, to whom the land had been farmed out. Such an arrangement often meant a considerable return to the landowner or direct farmer at the 243 expense of the peasant labourer. On the large holdings wheat was the main crop, only about 14 per cent of the maize in Old Roumania being grown on large holdings. There are a number of reasons for this. First, more capital is required for the cultivation of wheat; wheat seed grain costs ten times as much as maize for an equal area; then, in the higher lands, where the smaller holdings are to be found, the heavier rainfall and shorter growing period is more conducive to maize cultivation than to that of wheat. Again, the traditional staple food of the peasant is the easily prepared "mamaliga" or maize pudding, and the difficulty of persuading a peasant people to change their habits of life is well known, also the heavy animal fodder provided by maize is an important consideration for the peasant. And lastly, where the maintenance of life is dependent on an adequate winter store, the peasant is more concerned with securing that tangible store than with providing a cash crop with which to acquire luxuries. The large farmer, on the other hand, was mainly concerned in producing a surplus crop of wheat for export.

423 BETWEEN 1916 and 1926 a great redistribution of land in the interest of the peasants took place both in Old Roumania and in the newly-acquired territories. Such a redistribution in a land with important ethnical minorities has naturally given rise to much discontent among the dispossessed landlords and as naturally forms the basis of much political discussion and unrest and endless propaganda by all parties. But we are only concerned here with the economic results of the redistribution.

423 241 IT MUST be recognised that the change from large- to small-scale farming, however advantageous to the peasant against whom the scales had always been weighted in the past, means a change in the character of the land cultivation, and though farming methods even on the large farms cannot be said to have been very enlightened, a certain amount of

423 241 capital expenditure on the provision of machinery, artificial manures and so forth had been possible, and labour was cheap and available when required. With the small holding, these advantages can be acquired only by means of a highly-organised co-operative system and a controlled credit organisation, and there is no doubt that there has been a set-back in productiveness of large sections of the land. The large holders have been greatly handicapped in the exploitation of their land, moreover, first by government restrictions in the matter of wheat export, and second, by the great slump in wheat prices, probably also by inclement weather conditions. As a result there has been a drop of over 12 per cent in 1933 in the acreage under wheat and a corresponding rise in that under maize and barley.

241 322 To GET the best out of Roumanian agricultural land, improved communications is one of the first essentials, for the removal of surplus crops, for the supply of artificial manures, particularly nitrates, and for the spread of agricultural education. The Roumanian peasant is backward in farming methods and requires help, both educational and financial, in such matters as seed selection and manuring. He uses too light a plough to get the best results from the soil and for the conservation of moisture in the soil. A system of irrigation would be of immense benefit not only in the plains but also in the valleys of the uplands. Of course, lacking the great reservoirs of water in snowfield and glacier and lake with which Switzerland and Austria are endowed, the perennial irrigation which is common in those lands cannot be so easily obtained, though much more utilisation might be made of the streams if the peasantry were more enlightened in their use. Large-scale irrigation works would necessitate the construction of reservoirs in the major river valleys to store the surplus rains of spring and early summer and the snow melt. Control of the streams is a very urgent matter, for the amount of damage they cause, in the sudden floods to which they are liable, to roads, bridges and to arable land is enormous. One of the great difficulties that the engineers have to deal with, and this may also be an important consideration in reservoir construction, is the friability of the rock material in most of the foot-hill country of the Carpathians. (This was illustrated very forcibly in a journey by car from Vatra Dornei through the Campulung district.)

242 Dry farming is practised to some extent, but is capable of
312 development in the districts of semi-steppe.

1 CO-OPERATION.

476 ALTHOUGH it is not by any means reduced to a science, as in Belgium and Denmark, for example, co-operation is practised by the Roumanian peasant farmer to an important extent. In Transylvania and Bessarabia, the system has for long been well established, owing to the initiative and encouragement of village priests and schoolmasters. For example, there are community herds of water buffaloes, which tend
474 to prevent deterioration of the breed. The forest industry is in the main run by co-operative societies which control the felling, local distribution and marketing of timber.

IN 1931 there were 5,200 popular co-operative banks, with over 1,150,000 members; 236 forest co-operative societies, with about 341,600 members; 1,600 consumption and supply co-operative societies, with 236,000 members; besides a number of village buying and leasing associations.

241 MUCH has been done, and efforts are continuing by propaganda and instruction, to encourage more up-to-date methods among the peasant farmers and there are a number of schools for primary instruction in agricultural method. Modern farm machinery is loaned by the Ministry of Agriculture to peasants for small fees, stud farms have been established to improve the breed of horses and cattle, and funds have been loaned to the peasant communities for the purchase of stud animals.

INDUSTRY.

135 FROM the point of view of power and raw materials for the development of industry, Roumania is also well endowed by nature. True, her supply of coal is negligible, the only deposit worth mention being that of the brown coal basin of Jiul at Lupeni in Oltenia, which is capable of producing about two million tons per annum. (The output in 1933 was in the neighbourhood of 1.4 million metric tons.) It contains much sulphur but is used to some extent in iron smelting. On the other hand, there are very rich stores of mineral oil. The oil-bearing rocks occur in abundance along the outer rim of the Carpathians in lower Miocene deposits which are

135 rich in salts. More accessible than these deposits are those of the sub-Carpathian hill country where upper Tertiary rocks are intensely folded in with salt-bearing Flysch deposits and have become impregnated with oil from the salt formations of the Flysch that has been forced up along lines of folding and fracture. Exploitation is mainly confined to the oil of these Pliocene rocks.

315 THE MAJOR oil-field follows the Carpathian arc from the neighbourhood of Piteşti through Targovişte, Ploeşti in Muntenia and northward through Bacau in Moldavia to the Polish frontier (i.e. within the districts of Dambovița, Prahova, Buzau and Bacau in the Trotuş valley). There is also a small field in the Maramureş district.

THE Prahova district is the most important, producing 65 to 70 per cent of the whole, while Dambovița produces about 25 per cent. Pre-war development of oil industry was mainly in the hands of foreigners. By the 1929 Mining Law equality of Roumanian and foreign capital is provided. By an Act of 1924 the subsoil became the property of the State, which grants new leases for a period of thirty years. The State has acquired oil plot zones as permanent reserves. Oil getting is proceeding on up-to-date lines. Deeper strata are being tapped as the upper one becomes exhausted. Modern wells now reach down to about 1,800 metres. In Prahova and Dambovița State concessions are the most productive and active (e.g. Moveni and Gura-Ocnitsei). The total output of crude oil in 1933 was 7.37 million metric tons, 19.7 of the total oil products being used for home consumption.

NATURAL GAS is also tapped in the oil-fields for gasolene and for domestic lighting and heating. It is largely used in the chemical industry. Transylvania has no oil of importance, but some useful gas-fields. Crude oil is used for steam raising in the metallurgical industry and for generating electricity: it also figures as fuel in the tile and pottery industry. Oil- and petrol-driven machinery is installed in electric factories, in pottery and tile works, and particularly in the alimentary industries.

313 TIMBER, owing to the lack of good communications and to the abundance and lavish use of the forests, remains an important item in the production of power, particularly in

313 the small industries of the remoter upland districts. It is particularly important in the wood and pulp and paper industries, and in the small textile and pottery works. Charcoal is still used for smelting.

377 ELECTRICITY is mainly generated thermally, in spite of the great potentialities of water-power provided by the rivers from the Carpathians, not to mention the Danube current. Lack of natural reservoirs in snow-field, glacier and lake means that exploitation of the hydro-electric resources would entail enormous capital expenditure in the construction of reservoirs. The sum total of direct water-power used must, however, be very great, for the number of water-wheels is legion.

317 SALT is another asset of real importance. Like the mineral
oil, it is found in greatest abundance, and is most accessible,
in the upper Tertiary deposits of the sub-Carpathians, in
the region of greatest disturbance. Sometimes it is exposed
in cliffs, sometimes it is covered with thin layers of loam.
Salt mines are being worked at Slanic, at Targu-Ocna (Tergu
316 Ocnei) in the Trotuş basin, and at Ocnele-Mare (Ocna) on
the Olt. In 1932 the amount extracted was 288,000 metric
tons, of which 240,500 tons were for home consumption, the
rest being exported to the Balkan countries and to Russia.
Salt mining and marketing are state monopolies.

IN iron ore Roumania is not rich, the output being only about 90,000 tons per annum. The most important deposits lie in the mountains of the Banat and in the Poiana Ruscai (Ruszka) massif farther north, between the Mureş and the Bistra (Bisztra) tributary of the Timiş (Temes). The Reciţa (Reciţa Montana) district in the Banat mountains, opening towards Hungary, has foundries and steel works employing about 15,000 hands.

WITH the recent rise in the price of gold, the mining of that metal, which formerly was almost negligible, has become more active, and the output reached nearly 4,000 kgs. in 1933. The ore is mined in the Trachyte massif of the Bihor.

433 IN SPITE of considerable advantages in natural resources, and solicitous nursing on the part of the State, particularly in the Old Kingdom, industry in Roumania is still in its

433 infancy. The mass of the people—the peasants—still supply [294] their own modest wants almost entirely. The women make, in their own homes, the garments required by the household for summer and winter, using home-spun wool and home-woven cotton. A village expert fashions the leather embroidered coats worn by men and women alike. In the mountains, often the foot-gear is still of local manufacture. (Hats and shoes are mainly imported from the town, however.) 342 Houses are made of locally-felled and sawn timber, and all the household utensils and furniture, except the crockery, are made in the village.

254 THERE is little accumulated capital in the country, and it is natural that modern industrial developments should tend to be based on local raw materials and traditional skill. Home-grown wheat, maize and barley feed the flour-milling and brewing industries which are well developed. There are about 400 large flour mills, steam driven and capable of producing graded flour. These are mainly in the Old Kingdom and grind wheat chiefly. The wheat districts of Bessarabia and Bucovina have a number of modern mills, as well as a large number of windmills, but the maize districts still use the old-fashioned water-mills, which can only grind coarse meal. The brewing industry has been encouraged by the government, partly with the idea of reducing the consumption of the potent alcoholic beverage, "ţuica", which the peasants distil from plums. Most of the breweries are either in Bucureşti and Iaşi or in one of the larger Saxon towns of Transylvania. Potato and maize spirit are made on a large scale, particularly in Transylvania, for export.

323 FOR POTTERY MAKING the Dobrogea supplies a good kaolin, but the industry has not reached a high stage of development, although the ancient peasant pottery has much merit in form and decoration. This is due in part to lack of suitable fuel for the furnaces.

339 WITH the acquisition of Transylvania, Roumania has become independent in the matter of that most important constructional commodity, cement.

288 THE TEXTILE INDUSTRY is still backward. The post-war development is chiefly in the Banat, where, under protection, silk, artificial silk, cotton and wool have made

288 progress. The production of cocoons is in the neighbourhood of half a million pounds weight per annum. The production of boots and shoes is sufficient to supply the home market but the quality is poor.

FOREIGN TRADE.

ROUMANIA produces in bulk for export three things: timber, grain and oil. The market for timber is the eastern Mediterranean and chiefly Egypt. Where good rail communications are lacking, the timber is moved from the forested Carpathians by water. Much is floated down the various tributaries of the Siret to Galaţi and the Black Sea. It is unfortunate that up-stream transport to western
439 markets for this bulky commodity should be so difficult, while in the Levant it has to meet the severe competition of cheap Russian timber. In the up-stream markets there has been keen competition from Jugoslavia and Poland. Cheap rail freights and abatement of export tax are means taken to combat the retrogression of the trade.

WITH REGARD to trade in grain, Roumania suffers in common with all grain-surplus producing countries. Before the War the lower Danube and Black Sea grain trade was closely linked with the demand for British coal in the Mediterranean countries, the return cargo ensuring cheap freights for a more or less regular supply. The slump in the British coal trade, the check on production brought about by the break up of large estates, a series of bad harvests, and finally a world slump in grain prices, which reduced the export price of wheat below that of the home market, all these factors have been at work in reducing the wheat trade of Roumania and producing a consistent decrease in the average value per ton. Poor transport facilities and port equipment have also acted adversely in the moving of timber and grain.

THE EXPORT of petroleum increased from 2.8 million tons in 1929 to 5.6 million tons in 1933, drilling activities having increased, especially in the Damboviţa district. The port of Constanţa has been considerably improved by the installation of 10-inch pipe-lines, the construction of oil reservoirs, the fitting of special hose-handling cranes and the doubling of the railway track between Cernavoda and Constanţa.

000 AN IMPROVED world situation with regard to oil would benefit Roumania very greatly, for the oil industry may fairly be said to be the one industry of the country which has developed to the stage of maturity.

TRANSPORT.

489 THE TRANSPORT of the country is organised, where it is organised, from the standpoints of trade, administration and defence, but from all these standpoints re-orientation has been necessary since the acquisition of new territories, and so far achievement has only been very partial. In measuring the extent of progress the great engineering difficulties and immense cost of construction in so mountainous a country where disastrous floods are a common feature must not be forgotten.

487 THE OLD KINGDOM developed its lines of communication as a purely agricultural country with a grain and timber surplus for export. Its natural markets were the industrialised countries of west-central and western Europe, where grain and timber could be exchanged for manufactured goods. The Danube river seems at first sight to offer the natural line of communication to the west, but its swift current has always been an obstacle to up-stream traffic, especially before the days of high-powered river-craft, and the still greater obstacles of the Iron Gate reefs and the Klissura gorges and cataracts have always prevented the full use of the waterway. Through the gorges of the Banat, Trajan's hanging road is replaced by the fine metalled Szecheny road built by Hungarian engineers a hundred years ago, but there is no railway along the river except for the small stretch between Orşova and Turnu Severin, the marsh and lagoon and loose sand of the lower Danube valley present conditions that have from early times diverted traffic away from the almost bridgeless river. From Roman times the Cerna and Timiş valley route has been the more important western exit from the lower Danube plains. The Roman bridge at Turnu Severin gave access to the Jiu basin and the Valcan (Vulkan) pass. Both these are important railway routes to-day.

AN ALTERNATIVE to the up-stream route, and one which gives full advantage to bulk cargoes utilising the Danube, is that via the Black Sea and Mediterranean, and thus we

487 find that, in spite of the classical importance of the Danube valley as the link between the Orient and the west of Europe, the Black Sea ports drew the trade of the Lower Danube and Siret basins and established a traffic with the Mediterranean and north-western lands which increased in importance until the Great War. A two-way traffic in Danube grain and British coal gave a great advantage to British merchants and British shipping, the only other shipping engaged in the lower Danube traffic, that under the Greek flag, coming a long way behind. Partly as a result of the cessation of her Mediterranean coal trade, and partly as a result of energetic development of Greek, Italian (carrying mail) and Roumanian shipping lines (the last two subsidised), Great Britain in 1933 stood fourth on the list, being outstripped 505 by Roumania itself, which has recently purchased a couple of 8,000 ton Hamburg-America liners. Braila and Galaţi, the two grain ports of Wallachia and Moldavia (which, with a depth of 20 to 24 feet, can accommodate 6,000 ton ocean-going steamers) have up-to-date equipment, the former catering mainly for the Prut river traffic of Bessarabia and the latter for the larger Wallachian hinterland. 514 A large number of small grain ports on the Danube remain so far with but primitive equipment. Constanţa, on the Black Sea, has received most of the attention of the Government, in the form of petrol basins, pipe-lines, dredging, etc. It is, of course, a rail port and has thus the advantage over the ports of Braila and Galaţi when the Danube and Prut are frozen, as they usually are fro December or January till March, or in summer when water is low. Over a period of forty-seven years there were only eleven years when the rivers remained open.

The Siret, which debouches at Braila, is unfortunately unnavigable, and can only be used for floating timber, which is shipped in ocean-going vessels at Galaţi. The port of Sulina and the channel between that port and Braila, entirely under the administration of the European Commission of the Danube, has recently been much improved, and traffic on the Sulina arm has accordingly improved too. It is, however, feared that, in spite of the extension of the moles, the persistent silting at the Sulina outlet will render necessary the diversion of the Sulina cut to an outlet five miles to the south.

496
499 Roumania has had a hard and costly task in the restoration of her railways and rolling stock to pre-War efficiency. This has been accomplished, and, in addition, steps have been taken towards the re-orientation of communications necessitated by the change of frontiers. A new line is under construction to link Braşov in Transylvania with Buzau and so with the Danube and Black Sea ports. It should play an important rôle in the movement of timber. The Olt valley line from Sibiu is being linked with that which runs from Bucureşti up the Argeş valley to shorten the journey from Bucureşti to Arad and western Europe. It is planned also to link up the Reciţa iron district with the Jiu valley coal field and bring both into closer communication with the capital.

491 Although there has been great progress in the reconstruction and improvement of the railways, road transport is still frankly bad. Only about 17 per cent of the roadways of the country are metalled and can be described as in fairly good condition. The bulk of the roads are mere dirt tracks, which vary in their resistance to frost and rain according to whether they lie on the dusty chernoziom, the loose brown soils or the more cohesive and better-drained podsol.

Hilda Ormsby, D.Sc. (Econ.)

VII.—CORBU: A CARPATHIAN VILLAGE

I. THE COMMUNE AND ITS INHABITANTS

POSITION.

THE VILLAGE OF CORBU is situated in the eastern Carpathians at a height of 700 metres above sea-level. It stands just to the east of the main water divide, and in pre-war days was included within Austro-Hungarian territory, the boundary cutting across the Bistricioara valley a few miles below the village.

THE COMMUNE sits astride one of the Carpathian passes, the Bistricioara valley linking up with that of the Mureş on the one hand and of the Bistriţa on the other to form a continuous route from Transylvania to the Moldavian Plain. Its position naturally made it the centre of a good deal of fighting during the War, and the blasted spruces on the slopes above the village are grim mementoes of the struggles that took place.

PHYSICAL FEATURES.

THE PHYSICAL GEOGRAPHY of the commune is comparatively simple. The Bistricioara river, which cuts the commune into two unequal segments, is the principal feature. On either side it receives tributary valleys for the most part normal in profile, though in one or two cases a steep-sided and narrow lower section gives place higher up to somewhat broader, flat-bottomed stretches. Indeed, the upper Bistricioara itself winds its way through a fairly extensive intermont basin of this kind in the commune of Bilbor just before entering that of Corbu.

AT ONE POINT the main valley is constricted by an outcrop of Porphyry which appears formerly to have extended right across the present course of the Bistricioara. It has been breached, however, leaving a truncated spur running out from the south side of the valley and affording excellent views both up- and down-stream. Largely as a result of deforestation the crystalline schistose and gneissic slopes which rise steeply on either side of the main valley are scored with numerous re-entrants, the masses of detrital

133 361 material eroded therefrom being spread out fanwise along the edge of the alluvium. Higher up, small alp-like terraces appear, giving place to precipitous slopes once more where calcareous rocks of Triassic and Jurassic age occur.

132 361 CONCERNING climate and vegetation little need be added to the accounts already given of the Eastern Carpathians as a whole. In the case of climate the most important features to be borne in mind are the risk of late summer storms that limit the ripening period for grain, and the winter snowfall which creates a close season for agriculture.

THE VILLAGE.

361 CORBU has been tentatively classified as a "dispersed" type of village, though it is clear from the photographs (Plate IX) that the narrowness of the valley has rather limited the extent of the dispersion and has given rise to a plan resembling that of the "street village" of Western Europe. Closer examination, however, will reveal a certain looseness of structure, especially where a slight widening of the valley occurs near the confluence of a tributary stream, and it is very probable that if the same village had been founded in a broad flat upland area the houses would have been spread out as in Bilbor (see Plate I).

PEASANT HOUSES.

342 A GROUP of typical Roumanian farmsteads is illustrated in Plate X whilst the plan on page 67 shows in detail the lay-out of the one depicted on page 43. The principal features in each case are clear. The dwelling houses, of which there are frequently two to a farm, can usually be distinguished by their bright colour-washed walls. There is an abundance of local stone, but the crystalline rocks that are nearest to hand are very intractable, and, although they are employed for the foundations, the superstructure is almost invariably of wood. In Lower Borsec, which is just visible in the distance in Plate IX, an outcrop of Travertine provides a much more easily-worked material, and is very freely employed, but its use does not appear to extend into Corbu. The walls of the Corbu houses are usually built of roughly-squared, less frequently of sawn, timber, to which, in the better-class houses, laths are nailed to form a key for

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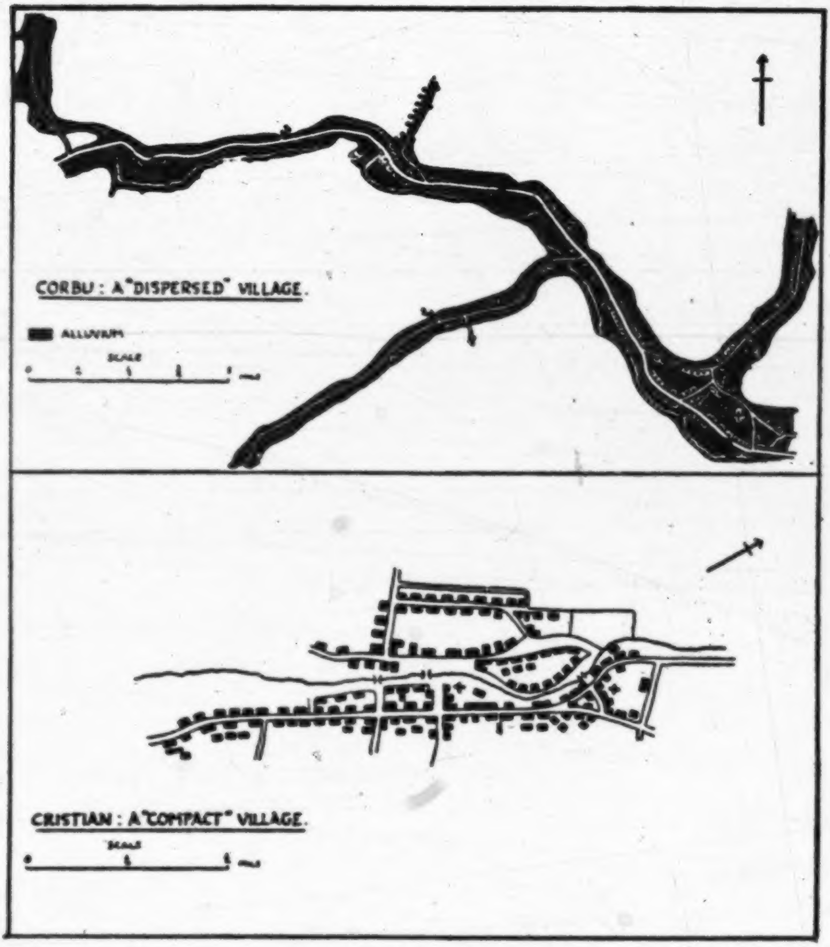
CORBU : A "DISPERSED" VILLAGE.
ALLUVIUM
SCALE
CRISTIAN : A "COMPACT" VILLAGE.
SCALE

Figure 8. The amorphous plan of Corbu contrasts strongly with the more orderly and compact village of the plain. Cristian is near Braşov.

34-2 the plaster with which the exterior is then coated. In the poorer houses the gaps between the timbers are merely caulked with clay before a colour-wash is applied.

The most popular type of roofing material is shingles, which is a welcome contrast to the sheet iron of the plain, though perhaps less picturesque than the steeply-pitched roofs of thatch that are a feature of other mountainous parts of the country. On some of the houses, usually those of the poorer inhabitants, shingles are replaced by longer boards which sometimes extend from ridge to eaves, all three types being illustrated in Plate X.

4:Fleure S-5 (no date)1936 EDl Rumania EDl

361
133

Corbu—view from top of porphyry spur looking down-stream. Arable land on the valley floor is devoted mainly to the cultivation of maize. On the right in the foreground lucerne is seen stacked on poles. The lower portions of the steep hill-sides have been cleared for hay meadows, but continuous stretches of forest clothe the upper slopes.

Photo: R. A. Pelham.

Corbu—looking upstream towards Borsec.

Photo: R. A. Pelham.

[facing page 64]

4:Fleure S-5 (no date)1936 EDl Rumania EDl

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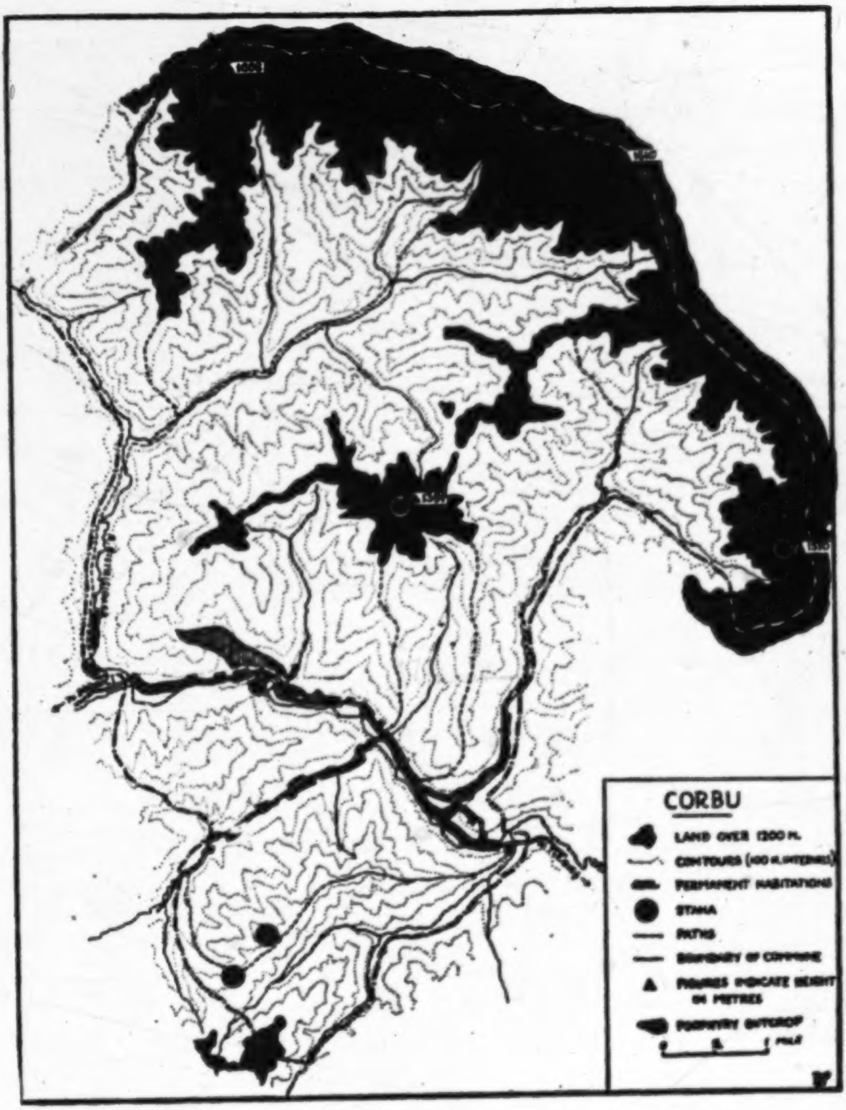
CORBU
LAND OVER 1200 M.
CONTOURS (100 M. INTERVAL)
PERMANENT HABITATIONS
STANA
PATHS
BOUNDARY OF COMMUNE
FIGURES INDICATE HEIGHT IN METRES
MILE

Fig. 9

f

4:Fleure S-5 (no date)1936 EDl Rumania EDl

PLATE X

241
133

Hay meadows on deforested slopes above the limits of cultivation at Corbu. Although this is the upper section of a valley tributary to that of the Bistricioara, it is much broader than the narrowly constricted lower section.

Photo: R. A. Pelham.

342
361

Typical Roumanian farmsteads in Corbu. The houses are roofed with shingles, the outbuildings with boards. The house in the centre has the characteristic louvre in place of chimney, and its walls are of timber with plaster covering. Hemp is drying on the verandah. The mud caulking in the outbuilding is clearly visible.

Photo: R. A. Pelham.

[Facing p. 18]

342 374 A MARKED FEATURE is the comparative absence of chimneys. The cooking is done in an outhouse, no doubt to minimise the risk of fire, but the dwelling house is generally heated by a stove, the smoke from which passes up through the ceiling in an iron pipe and then escapes into the open air through holes cut in the gable ends or, in the case of a hipped roof, through a small louvre.

345 THE OUTHOUSES are for the most part simple structures and call for no special comment.

511 CLEANLINESS and simplicity are the keynotes of the domestic economy. Household effects are kept down to a minimum, but upon their manufacture an enormous amount of time and skill is lavished, especially in the case of textiles. The skilfully-woven designs on the tapestries and pillows shown Plate XVI are an illustration of such effort.

POPULATION.

161 563 ACCORDING to the 1930 census Corbu had a population of 1,563, distributed among 358 households. The majority of the inhabitants are, of course, Roumanians, for the commune lies right on the fringe of the Szekler country. In spite of having lived in close association with the Roumanians for many generations, however, the Szeklers are easily distinguished by their dress, their physical type (though this is by no means an infallible guide), their adherence to Roman Catholicism, and, of course, their language. Although culturally there is an appreciable difference between the Roumanian and Szekler peasantry, there is to-day an even wider gap between these folk and the Tsiganes or Gipsies who form a much smaller, though very interesting, minority. 142 Generally speaking, the Roumanians contribute a dark, and the Szeklers a fair, element to the broad-headed population, whereas the Gipsies are for the most part distinctly long-headed and very dark. There is an equally well-marked difference on economic grounds, for both Roumanians and Szeklers are essentially peasants, whereas the Gipsy, being landless, is compelled to seek a livelihood by trading, unless he be either smith or musician, following the traditional pursuits of his forbears (see Plate VI).

342 563 THE HOUSES occupied by Gipsies, while resembling in style those of the peasants, can usually be recognised by the

CORBU

PLAN OF PEASANT FARMSTEAD

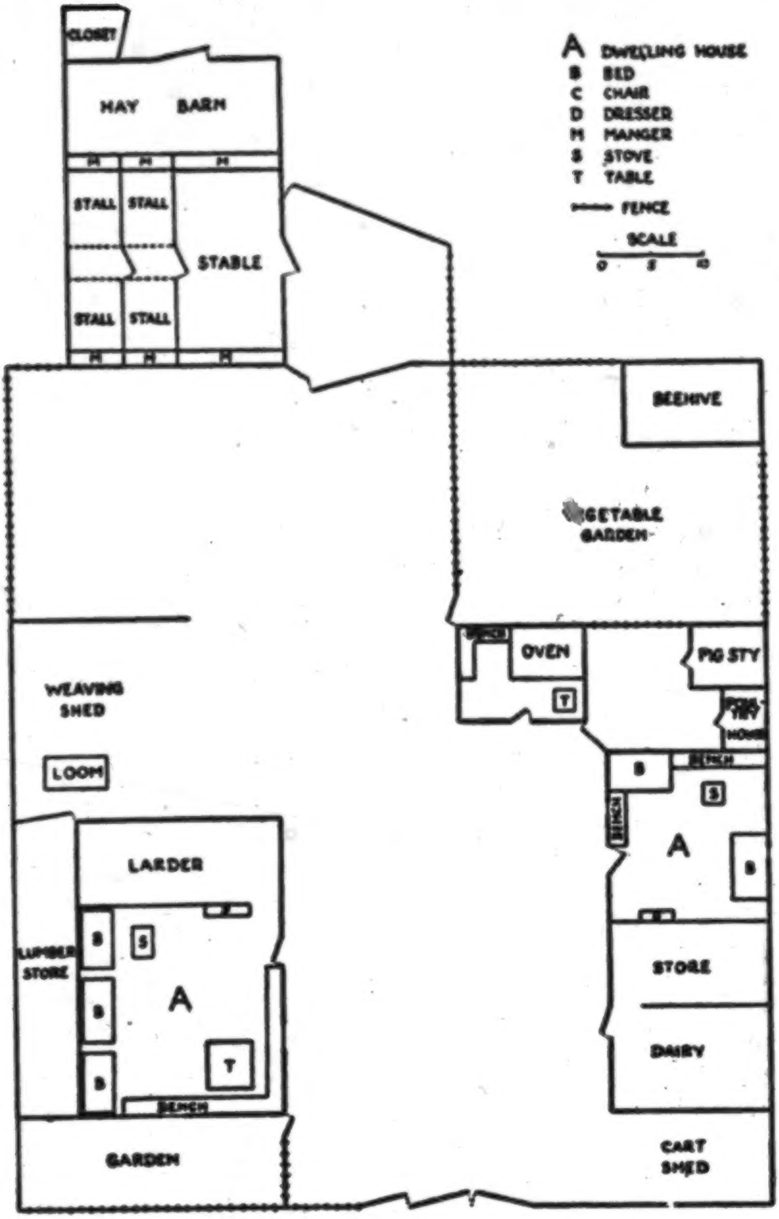
CLOSET
HAY BARN
M
STALL
STALL
STABLE
STALL
STALL
A DWELLING HOUSE
B BED
C CHAIR
D DRESSER
M MANGER
S STOVE
T TABLE
FENCE
SCALE
0 5 10
BEEHIVE
VEGETABLE GARDEN
BENCH
OVEN
T
PIG STY
POULTRY HOUSE
WEAVING SHED
LOOM
BENCH
B
S
BENCH
A
B
LARDER
B
S
LUMBER STORE
B
A
B
T
BENCH
STORE
DAIRY
GARDEN
CART SHED

Fig. 10

342 563 absence of small fields, although a vegetable garden is a normal feature. Most of them are grouped together in a small colony on a piece of steeply-sloping ground near the western end of the village that could not be used for agricultural purposes, thus emphasising the fact that they constitute an exotic element living on the outskirts of the community (see Plate XII and Fig. 11).

311 THERE is no emigration from Corbu, but the tendency is to extend cultivation by forest-cutting. A good deal of land in the Bistricioara valley is still available.

II. FARMING ACTIVITIES

THE LAND AND INHERITANCE.

428 241 FARMING in Corbu is carried on essentially for subsistence rather than for profit. Large-scale cultivation with its attendant economies would in any case be difficult in such an environment, but it is rendered impossible by a land tenure system, intimately bound up with laws of inheritance, which permits the subdivision of land from generation to generation. On the death of the father the widow receives a quarter of the estate, the remainder being divided equally amongst all the children. Alternatively, the latter take over their portion on marriage, but the result in each case is the same—the peasant holdings not only decrease in size but portions of the same holding may be widely separated. For it does not even follow that all the land surrounding a farmstead necessarily belongs to the family residing there. It did, of course, when the holding was first formed, but marriage has in most cases added complications. A portion of the holding, for example, may belong to a married daughter living elsewhere in the village and her husband will then come periodically to cultivate it as part of his estate. Much time is wasted in this way, so wherever possible an interchange of plots is arranged, especially where the parties to the marriage belong to different villages.

423 IN a register covering about 207 hectares of privately owned land there were 133 parcels registered, sometimes more than one in the name of a particular person. Of the 133, 56 were less than one hectare each, but at least 8 of these parcels were accessories to other holdings and those owners

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PLATE XI

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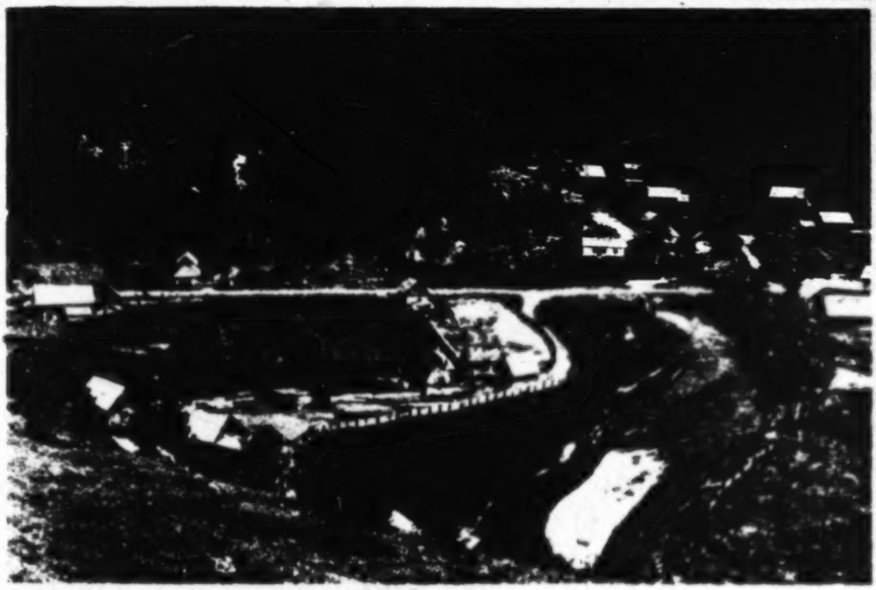

This is part of the area mapped in Fig. 11. The photograph is taken from the top of the porphyry spur shown in Fig. 9.

Photo R. A. [illegible]

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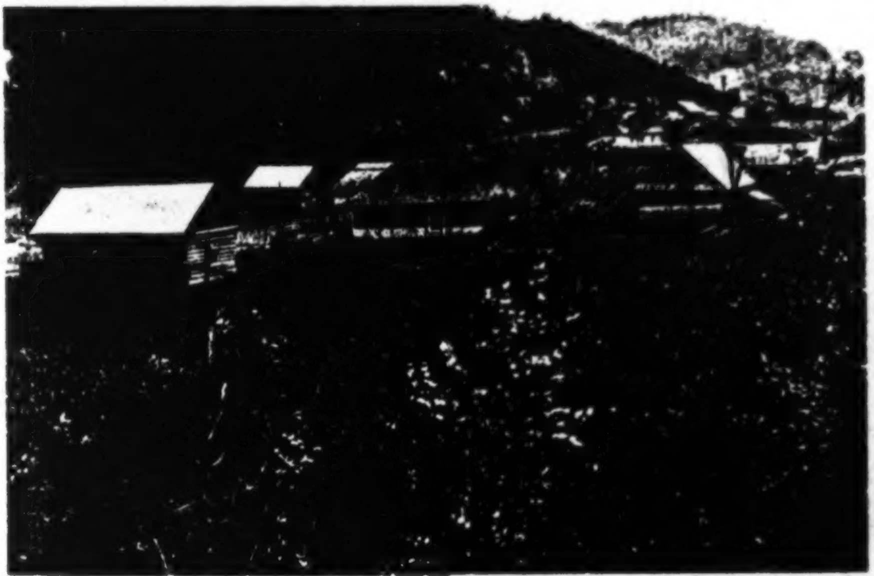

A peasant holding at Corbu in process of sub-division. A son about to marry is erecting a house (seen on left) on his share of his father's land. The parental farmstead extends across the right-hand half of the picture. A strip of maize is seen in the foreground and a small patch of hemp on the extreme left, close to the new house. For plan of holding see Fig. 11.

Photo R. A. [illegible]

[facing page 68]

423 dealt with a considerably larger area. Forty-six holdings were between one and two, 18 between two and three, 8 between three and four, 3 between four and five, and 2 larger (8.8 and 19.5) hectares in extent. These holdings do not necessarily represent the whole of the land owned by a peasant.

LAND UTILISATION.

311 BROADLY SPEAKING, the land within the commune may be divided into three categories: the alluvium of the Bistricioara valley and the lower portions of its tributary valleys which is devoted to arable farming; the deforested lower slopes of the valley sides, together with the broad upper portions of some of the tributary valleys and odd patches of level ground here and there which are reserved for hay; and the rest, which is forest with the exception of the small high-altitude clearings that provide summer pasturage for the transhumant flocks and herds.

311 423 ABOUT 58 per cent of the land belongs to the state, 37 per cent to the commune, and the rest, comprising about 400 hectares, is owned by the peasants. These 400 hectares represent the arable land of the commune, whilst the state lands are entirely forest. The commune lands include a certain amount of forest, together with the hay meadows and summer pastures. The law tries to make peasants plant trees to replace those that they cut down.

CROPS.

241 [262] IN the arable area the outstanding crop is maize, from which "mamaliga," the staple food of the peasants, is made. It is sown at the beginning of May, two hillings, separated by an interval of three or four weeks, are made during June, and the crop is harvested between September 25th and October 10th. Potatoes, hemp, flax, lucerne (of which three cuttings are usually made), a little rye, sunflowers and vegetables are grown, mostly in very small patches, giving the impression of garden, rather than field, cultivation. Occasionally a small orchard adds further variety to the general pattern.

246 THE HAY CROP is of vital importance, as in all mountain communities of this kind throughout Europe. It is harvested

PLATE XII

A Gipsy smith and his family. The building on the left is the forge.

The Gipsy colony in Corbu. The houses are clustered together on a steep slope and although resembling in style those of the Roumanian peasants are easily distinguished therefrom by not having any arable land attached.

Photo: R. A. Pelham.

[facing page 69]

4:Fleure S-5 (no date)1936 EDI Rumania EDI

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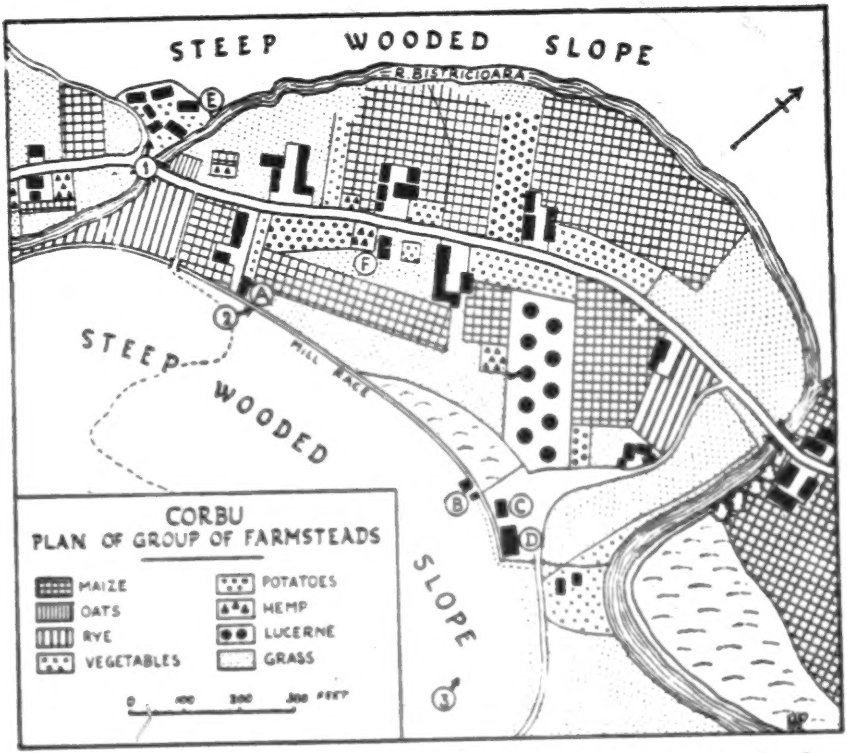

STEEP WOODED SLOPE
R. BISTRICIOARA
E
1
F
A
2
STEEP WOODED SLOPE
MILL RACE
B
C
D
SLOPE
3
CORBU
PLAN OF GROUP OF FARMSTEADS
MAIZE
OATS
RYE
VEGETABLES
POTATOES
HEMP
LUCERNE
GRASS
0 100 200 300 FEET

Figure 11. A = Joinery mill. B = Smithy (Plate XII). C = Wool-combing shed. D = Saw-mill. E = Gipsy colony. F = Holding in process of subdivision. Numbers refer to position and direction of camera: (1) Plate XII (lower), (2) Plate XI (lower), (3) Plate XI (upper).

in the Bistricioara valley in the early part of July, the peasants then working up the hillsides to the higher meadows where the hay-making is completed about the third week in September. What is not needed in the village byres is stacked on the lower slopes near the sheep pens in which the animals are housed during the winter months.

Transhumance.

Transhumance forms an essential supplement to arable farming in Corbu, for the cultivable land is too valuable to be used for grazing purposes except for a short time after the harvest, whilst the produce of the hay meadows is required for winter feed.

221 233 [342] **Scattered** over the commune are eight "stâne" or temporary summer settlements which are all situated between 400 and 800 metres above the village. The stâna itself is a simple affair, consisting of a log hut which affords living accommodation for the shepherds and acts as a dairy and store-house, together with the folds into which the animals are driven for milking. The one illustrated had a population of three men and two boys, all Roumanians, 350 sheep and 20 cows, as well as a few pigs, the only animals left in the village being the one or two milch cows retained at each farm for family needs and the draught animals (see Plate XIII).

234 221 **The** change from winter to spring takes place very rapidly during the second fortnight of April, and the ascent to the dairies is made at the end of that month or early in May. Before the animals are taken up the milk yield of the cows is tested in order to determine the apportionment of the cheese made therefrom, but the ewes' milk cheese is distributed on the basis of the number of sheep belonging to each peasant. Shortly after the ascent the village priest performs [234] the ceremony of blessing each stâna in turn, and before the end of May the sheep are sheared by peasants who go up specially for the purpose, the wool being brought down to the village on horseback.

233 221 476 **Since** the summer pastures are communal property their administration is in the hands of an assembly of heads of families which assesses the rent to be paid for the season—generally 12-15 lei for a sheep and 50 lei for a cow. The money thus received forms a fund from which the shepherds are paid for their services. Each peasant makes personal arrangements with the senior shepherd as to the amount of cheese he will require for household purposes, any surplus going into a common stock which is marketed at the end of the season. Any disputes that arise are settled by arbitration in the presence of the mayor when the shepherds return to the village. This takes place during the latter part of October, the descent of each group being celebrated by minor festivities at which the shepherds are the guests of honour. The general feast held when all are down marks the official end of the season's activities.

221 476 **Upon** their return to the village the cows are immediately stabled, but each peasant splits up his sheep into two groups,

233
231 the main flock being taken direct to the sheds on the foothills where they are fed on the hay gathered during the summer, whereas the remainder are grazed on the maize stubble until about Christmas. By then the weather becomes rather severe, and although sheep are better able than cows to withstand the rigours of a continental winter they are all kept in sheds during the early months of the year.

Surplus animals are disposed of at the autumn fairs at Tulgheş or Topliţa where they are bought up by dealers for conveyance to Italy or Czechoslovakia.

III. OTHER OCCUPATIONS

Textiles.

The outstanding feature of the Carpathian villages is the remarkably high standard of peasant craftsmanship. The degree of artistic expression revealed in their clothing is particularly striking, and although best seen on festive occasions it is scarcely less noticeable in their ordinary working garb. Wool, flax and hemp are the traditional fibres used, but imported cotton yarn is beginning to displace linen for some of the lighter summer garments. Most of the dyestuffs are obtained from local plants, for example, red from the leaves of the wild crab apple, yellow from the osier, black from the alder or birch and fawn from the walnut, but imported dyes are beginning to be employed. The mordant used is salt, but colours other than black fix themselves in wool without salt treatment.

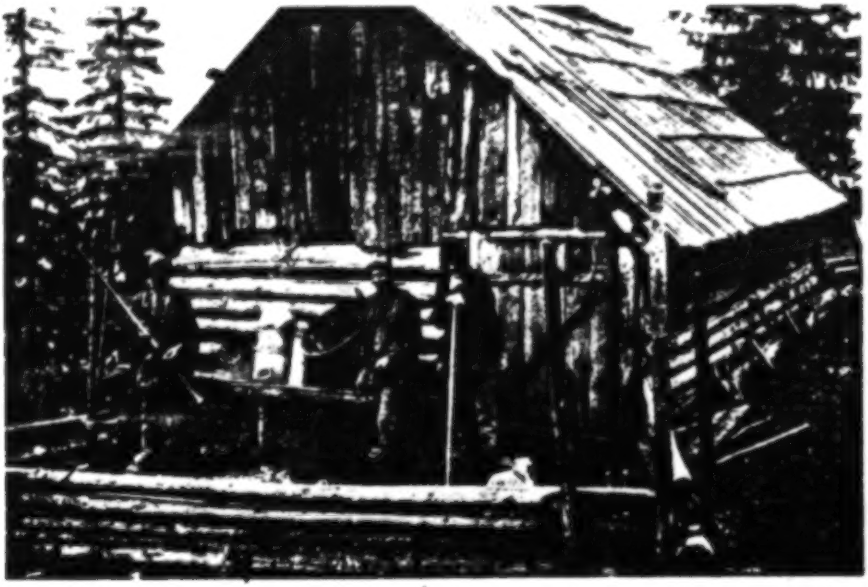
Spinning with a distaff is the normal occupation of the women in their leisure time during the summer, very little knitting being done at all. The other processes of combing, weaving and dyeing are also undertaken by the women, as is the embroidering of dresses and household linen, but the embroidering of the sheepskin waistcoats which are worn by both sexes is done by one or two men who specialise in this craft (see Plate XV).

Leather.

245 **Although** still made in the village, the old type of laced shoe with its characteristically pointed toe is being displaced

PLATE XIII

A Corbu "stâna" occupied by transhumant flocks during the summer season. A deforested portion of the mountain 2,000 feet above the village has been set aside for pasturage. The buildings are very simple. The large hut on the left combines the functions of dairy and dwelling house, the smaller sheds in the compounds being used for milking purposes. *Photo: R. A. Pelham.*



Close-up view of dairy showing adult members of "stâna" with their utensils. The man on the left is holding a horn. *Photo: R. A. Pelham.*

[facing page 72]

295 by imported boots and shoes, whilst socks and stockings bought at the local fairs are beginning to be preferred to the traditional method of bandaging the feet (see Appendix V).

WOOD.

312 THE most characteristic of the other local occupations are concerned with wood. Each peasant is allowed a certain amount of timber annually, the cutting of which is arranged by the Forestry Co-operative Society, but for every tree [531] felled a new one has to be planted. Among the men of the village the making of wooden spoons; jugs and plates, often elaborately carved, is a favourite pursuit, though it is being threatened by cheap imported metal goods, so that in this, as in other ways, a rapid transition from medieval to modern conditions seems likely to occur in the near future.

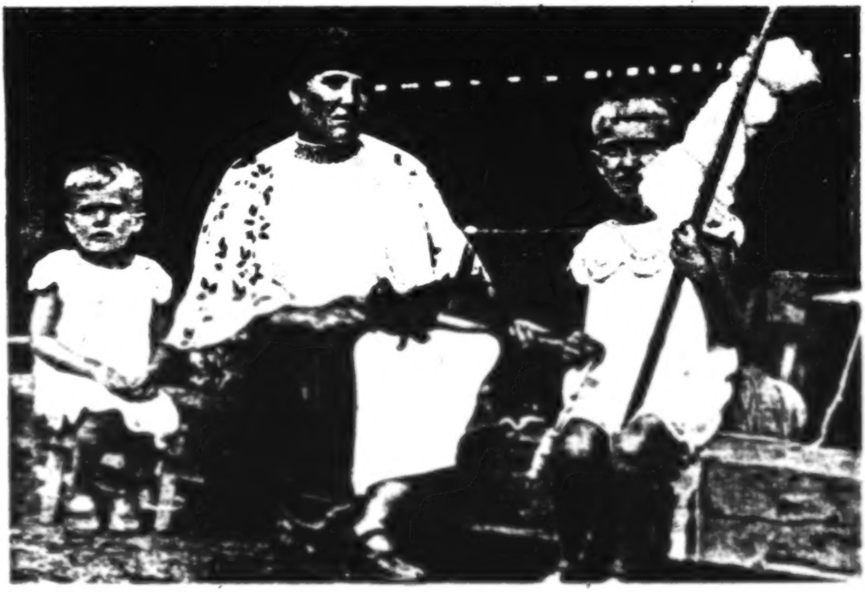
THE GREEK CATHOLIC PRIEST.

793 ALTHOUGH primarily concerned with the spiritual welfare of his flock, the Greek Catholic (Uniate) priest in Corbu, as elsewhere in Roumania, is intimately bound up with the economic life of the community. Following the rule of the Eastern and Uniate Churches for their secular clergy with a cure of souls, the priest is married and depends to a considerable extent upon his land for his maintenance. He is often trusted with public and private business on behalf of the commune and its members. To him the peasants may bring their maize to be ground, their sunflower seeds to be crushed, their timber to be sawn and their cloth to be scoured. The water of the Bistricioara that runs past the priest's house is harnessed to provide power at Corbu for these operations, and from the services he thus renders to the villagers the priest gets part of his income.

IV. THE FUTURE

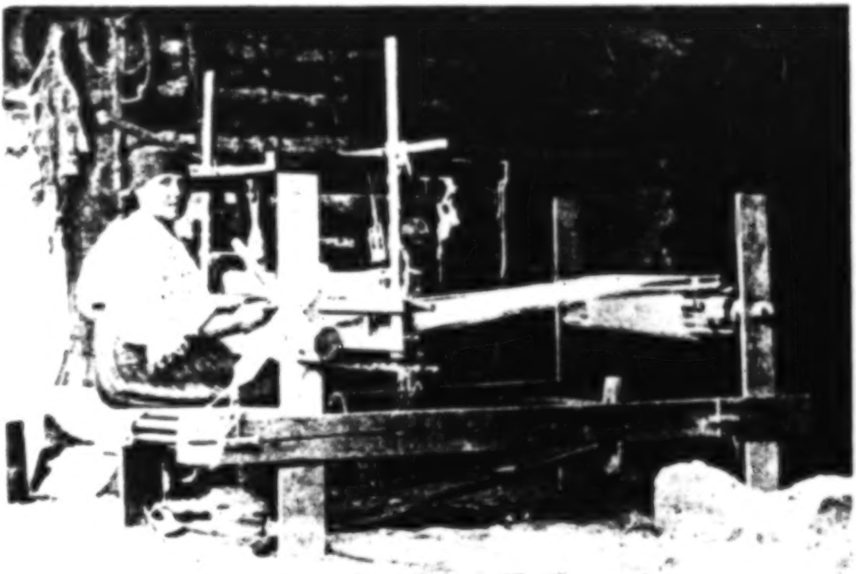
070 IT IS CLEAR from the foregoing account that Corbu is a mountain community that is rapidly approaching a crisis in its history. The old economic self-sufficiency is being undermined by the insidious influence of the journeyman, and the cheapness of the new wares that he is introducing will tend to increase the amount of leisure that the peasant already enjoys by releasing labour that he has hitherto expended on

PLATE XIV



Woman combing wool for spinning at Corbu by drawing it through iron spikes fixed in a wooden bat-like handle. The boy is holding a distaff. *Photo: H. J. Howard.*

[46]



Woman weaving on primitive home-made wooden loom at Corbu. *Photo: H. J. Howard.*

[facing page 73]

p. 74

000 manufacturing these essentials for himself. On the other hand, the neighbouring spa of Borsec will doubtless become an ever-increasing market for any surplus that the Corbu peasants may have for disposal, in spite of a toilsome journey of several miles that separates the two settlements, for its greater altitude and more exposed position make farming even more precarious there than it is at Corbu.

In this respect Corbu is in a more fortunate position economically than most of the other Carpathian villages, though culturally it may suffer by the multiplication of such contacts. At present the high-powered car dashing through the pass is insulated from the village by a cloud of dust in a way that seems to symbolise the distinction between urban and rural life. But that distinction is bound to diminish and be replaced by a scheme of interdependence which, it is to be hoped, will benefit both, though at the moment the reactions of this change upon social and economic life are fraught with danger.

It must have been foreseen that the mere distribution of land to the peasants in 1918 could be only a temporary solution to the land-hunger problems of the country. Sooner or later the natural increase in population, together with the continued subdivision of the cultivable land, was bound to lead to one of two things: either a rural exodus or an increase in the productive capacity of the farming land in the country. A steady drift into neighbouring towns or emigration abroad are solutions that unfortunately appeal to a conservative peasantry more readily than do suggestions of a scientific character for the improvement of agricultural technique, but the steady march of events since the war seems, at any rate for the present, to have eliminated the first alternative. The period of expanding industry before 1914, coupled with the ease of entry into America, enabled the pressure upon the agricultural land in Europe to be relieved without much difficulty, but these avenues are no longer open. Nor is it any longer as easy as it was before 1914 to export the surplus of the crops. The network of international exchange has been grievously damaged by the consequences of that war, and the policy of economic nationalism, though for a time offering considerable scope for development in countries that had previously been agricultural, has by no means fulfilled the high hopes of its

000

sponsors. Moreover, the immigration policy of the U.S.A. in 1923 and 1924, together with the inability of France to absorb further contingents of immigrants since the beginning of the present economic depression, has had the effect of bottling up these surplus rural populations in Europe within their own boundaries. Even so, however, in a country like Roumania much is still possible. It is true that any extensive addition to the arable land would reduce the area under forest, which, in view of the wealth that that represents is perhaps not desirable. But on the other hand, agricultural research, to which already several institutes scattered over the country devote themselves, should be able in time to increase the yield per hectare of the present arable land sufficiently to counter these adverse tendencies.

Nor should this preclude the possibility of a measure of industrial development. The high standard of native craftsmanship is a valuable national asset and one that should be preserved. Domestic industries are for the most part confined to the winter months, when farming activities are reduced to a minimum, and it is very much to be hoped that the peasants will be encouraged to develop that period of comparative leisure for the maintenance of those traditional elements in their culture which the modern machine may imitate but should never be allowed to displace.

APPENDICES

1. SOME VITAL STATISTICS OF CORBU

162 In 1928 there were born in Corbu 34 boys and 33 girls, of whom 53 babies belonged to Uniate and 13 to Roman Catholic households, while one was of Orthodox parentage. In 1929 the births included 35 boys and 27 girls, of whom 34 babies belonged to Uniate and 22 to Roman Catholic households, while 4 were of Jewish, one of Orthodox and one of Baptist parentage.

Of the fathers of 57 legitimately born children in 1928 forty-seven were described as peasants, five as labourers, one as joiner, one as baker, one as bootmaker, one as chauffeur.

Of the fathers of 55 legitimately born children in 1929 thirty-four were described as peasants, eleven as labourers, one as joiner, one as bootmaker, one as smith, one as forester ; these apparently do not include the 4 Jewish children.

Apparently the numbers of children in a family were usually 3, 4 or 5, but there was one family of 10 children. There were in the village 415 heads of households, among whom were included a number of widows.

52

2. "DOT," OR MARRIAGE PORTION

A girl of moderate means brings to her home on marriage :

- Seven to nine pillows, blankets and sheets ;
- At least fifteen towels ;
- Four or five carpets or rugs, to adorn the walls ;
- Personal clothes dependent on her skill. She will try to have special clothes for the great festivals such as Easter, Christmas, etc. ;
- Sheep, cows, and her share of the heritage from her father.

It is said that a girl begins to make her "dot" at the age of 6 years. The proportions of the sexes are approximately equal, and few adults remain unmarried.

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PLATE XV

WOMAN'S SHEEPSKIN COAT

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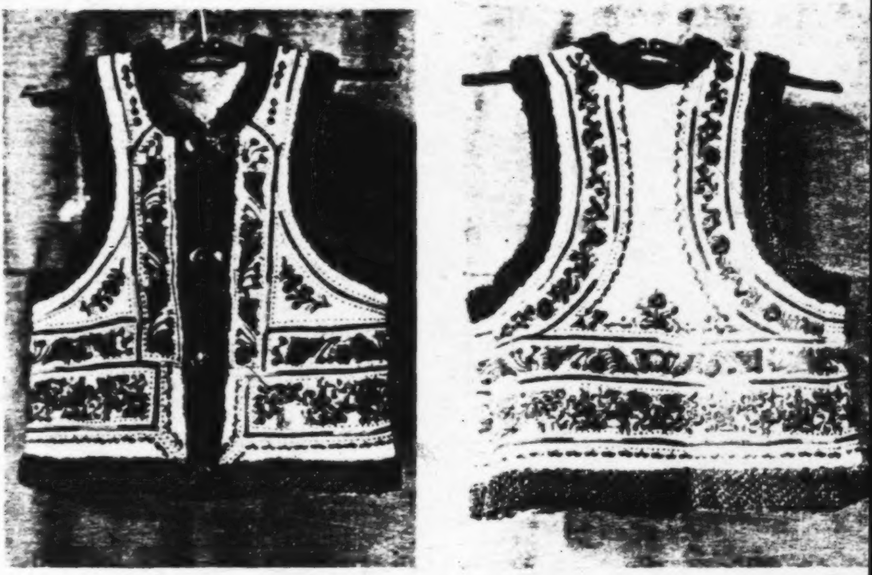
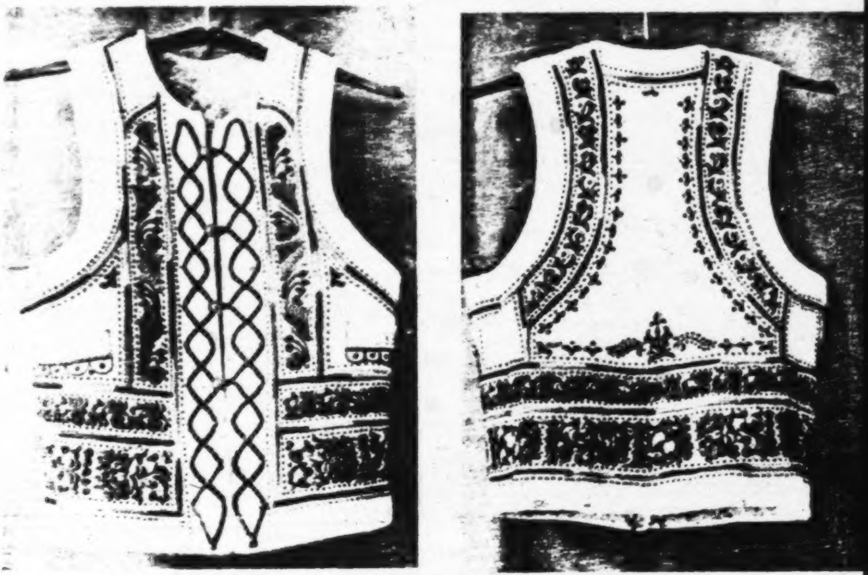
531



Front Back

MAN'S SHEEPSKIN COAT



Front Back

[facing page 76]

3. DOMESTIC ANIMALS

422 THE following figures were collected for two households (August 1933),
231 one smaller and one larger :

Farm A	Farm B
3 milch cows, two on high pastures, one at the farm	7 milch cows, six on high pastures, one at the farm
No draught oxen	2 draught oxen
1 calf	5 calves
2 horses	2 horses
30 sheep	50 sheep
2 pigs	4 pigs
15 fowls	21 fowls
15 beehives, near house	4 or 5 beehives, away from house in lower pastures

HOUSING for geese was usually available, and several flocks with six to eight geese in each were noticed on the road. A few turkeys were observed, also a few large guinea fowl in a farm in a tributary valley. There were doves at the priest's house.

THE Forestry control forbids the keeping of goats.

4. THE FARMING CALENDAR

221 LATE APRIL, EARLY MAY.—Prepare soil, sow maize and potatoes, harrow hayfields.

EARLY MAY.—Sheep and some cattle and pigs go up to the high pastures.

LATE MAY.—Peasants shear sheep on high pastures.

EARLY JUNE.—Weeding and first hilling-up of maize by work with a hoe when plants are 15-20 cm. high.

LATE JUNE.—Second weeding and hilling-up of maize. General tidying-up before hay harvest.

EARLY JULY.—First cut of hay in the lower lands.

JULY, AUGUST AND FIRST THREE WEEKS OF SEPTEMBER.—Hay harvest. Peasants make temporary shelters when harvesting in remote spots. Hay on hills mostly stacked near the shelters used for sheep during part of the winter. Beside this is a hut for the man in charge.

SEPTEMBER 25-OCTOBER 10th.—Maize harvest.

THIRD WEEK OF OCTOBER.—Potatoes lifted.

OCTOBER.—Stock brought down from high pastures and sorted out among owners by means of earmarks.

OCTOBER UNTIL FIRST SERIOUS SNOW.—Sheep may be kept in remote pastures that have not been much used or reaped.

THENCE UNTIL MAY.—Some sheep on lower hills near shelters with hay (see above, July, August). Some sheep folded on lowland fields to fertilise them. No artificial manure. Hay used as fodder. Lambing on lowland fields near homesteads.

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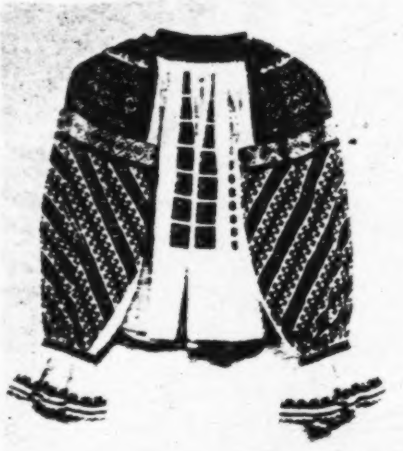
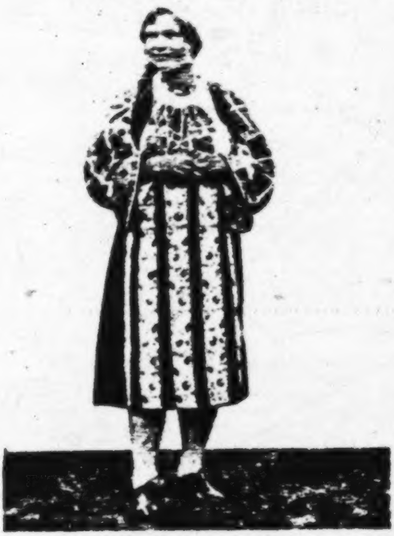


Woman's embroidered blouse.

Photo: Miss C. A. Perkies



Roumanian peasant at Bran in the Transylvanian Alps.

Photo: H. J. Howard.

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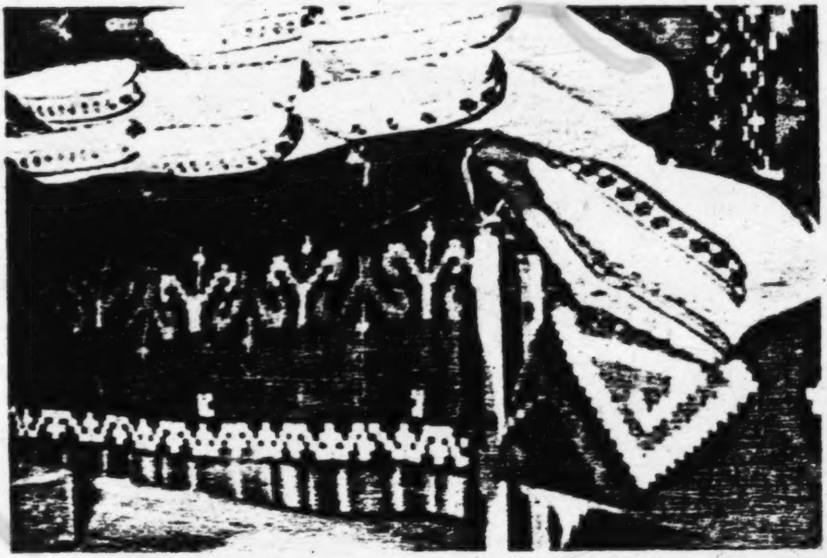

Portion of girl's dowry, showing elaborately embroidered pillows and bed-covers.

Photo: Miss G. I. Mactagh.

Plate XVI.

[facing page 77]

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5. THINGS SEEN AT BORSEC FAIR, AUGUST 20TH

[286] 1. MATERIAL BY THE YARD.

Cotton: Prints, calicoes, zephyrs, ginghams, men's shirtings.

Wool: Coloured serges, rough grey and brown woollen material (very thick) for men's and women's winter clothing.

Artificial Silk: In plain colours, Crêpe de Chine in plain colours, a very few printed silks.

Lace: Coarse white lace edgings (from Nottingham).

[291] 2. CLOTHING.

Men's: Trousers, coats, waistcoats, cloth caps, embroidered lambskin waistcoats, braces.

Women's: Knitted and crocheted wool caps and berets, patent leather belts. Printed cotton and artificial silk pieces for head coverings. Ribbons.

Children's: Babies' knitted woollen garments. Modern-style dresses in artificial silk with machine-made embroidery. Socks and stockings of cotton and wool hand-knitted in Roumania. Artificial silk stockings manufactured from yarn imported from Switzerland and France.

[295] 3. BOOTS AND SHOES FOR MEN, WOMEN AND CHILDREN.

Field boots and heavy nailed boots for men.

Manufactured boots and shoes for women and children.

Ready-made peasant shoes of leather.

Ready-made peasant shoes of leather with rubber attached to sole.

Ready-made peasant shoes made from old motor tyres.

Shoes of plaited felt of all sizes for women and children.

Shoes of knitted coarse wool with straps.

Pieces of leather of correct size for making the peasant shoes and leather thongs for lacing them.

Leather and mohair laces for using with the manufactured boots and shoes.

[415] 4. POTTERY.

Large brown glazed earthenware pots only. No other pottery of any kind was seen in the fair.

[285] 5. BASKETS, ETC.

Hand-made of rushes gathered by the peasants who make them. Some colour introduced into the larger baskets; strong, neat weaving. Also a few big hats as worn in the fields by the Hungarian peasant women.

244 6. GREENGROCERY.

Turnips, potatoes, yellow beans, cabbages, gherkins, carrots, onions, tomatoes, ardei, lemons, apples, pears, Indian corn, water melons, cantaloupes.

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[257] 7. CONFECTIONERY, ETC.

Gingerbread (all shapes).

Sweets: Packets of sweets, sweet-stuffs in various shapes. Dolls, ladies, hearts, diamonds, all with rough pieces of mirror inset.

[524] 8. TOYS.

The only toys for children seen were gaily-coloured thin rubber balls (large), also small wooden flutes similar to those used by shepherds.

[322] 9. CARVED WOODEN ARTICLES.

Wooden cigarette-holders; various sizes, some grotesquely large.

Mirrors with flower-borders carved in high relief.

Match-stands, cigarette stands, wooden boxes.

Large pipes (for playing jokes). Powder is secreted in the mouthpiece and is puffed into the face when the pipe is blown.

10. ARTICLES FOR THE HOME.

[285] Blankets patterned in red and natural wool.

Rug-strips made of pieces of cotton and woollen waste pieces of material.

[415] Modern cooking tins and saucepans, enamelled dishes and all sorts of "Household Helps," which attracted crowds of peasant women, e.g. egg and tomato slices, vegetable cutters, pastry moulds, etc.

Strainers with wooden frame and wire base, the wire coloured in tartan and other patterns.

Alarm clocks, boot polish in tins, soap, hempen rope and string.

[301] 11. CHEAP JEWELLERY, ETC.

Rings, brooches, neck and watch chains. Necklaces of coloured pearl and glass beads. Spectacles of plain and tinted glass. Jewelled combs for wearing in the hair. Studs, fancy buttons, thimbles, all kinds of plain and fancy pins. Mirrors.

BIBLIOGRAPHY

Constantinesco, M.: L'Evolution de la Propriété Rurale et la Réforme Agraire en Roumanie (1925).

Cvijic, J.: La Péninsule Balcanique (1918).

East, W. G.: The Union of Moldavia and Wallachia, 1859 (1929).

Evans, I. L.: The Agrarian Revolution in Roumania (1924).

Iorga, N.: A History of Roumania (1925).

Madgearu, V.: Rumania's New Economic Policy (1930).

Martonne, E. de: La Valachie (1902).

Mihailescu, V.: Les Grandes Régions Morphologiques de la Roumanie (Buletinul Societatii Regale Romane de Geografie, vol. 50, 1931).

Mihailescu, V.: Une Carte des Principaux Types d'Habitat Rurale en Roumanie (B.S.R.G., vol. 46, 1927).

Mitrany, D.: The Land and the Peasant in Rumania (1930).

Opreanu, S.: Le Pays des Sicules (Travaux de l'Institut de Géographie de l'Université de Cluj, vol. III, 1929).

Oprescu, G.: Peasant Art in Roumania ("Studio," Autumn Number, 1929).

Parvan, V.: Dacia (1928).

Pittard, E.: La Roumanie (1917).

Seton-Watson, R. W.: A History of the Roumanians from Roman Times to the Completion of Unity (1934).

Wachner, H.: Judet Ciuc, samt Toplita und der Muresenge (Travaux de l'Institut de Géographie de l'Université de Cluj, vol. III, 1929).